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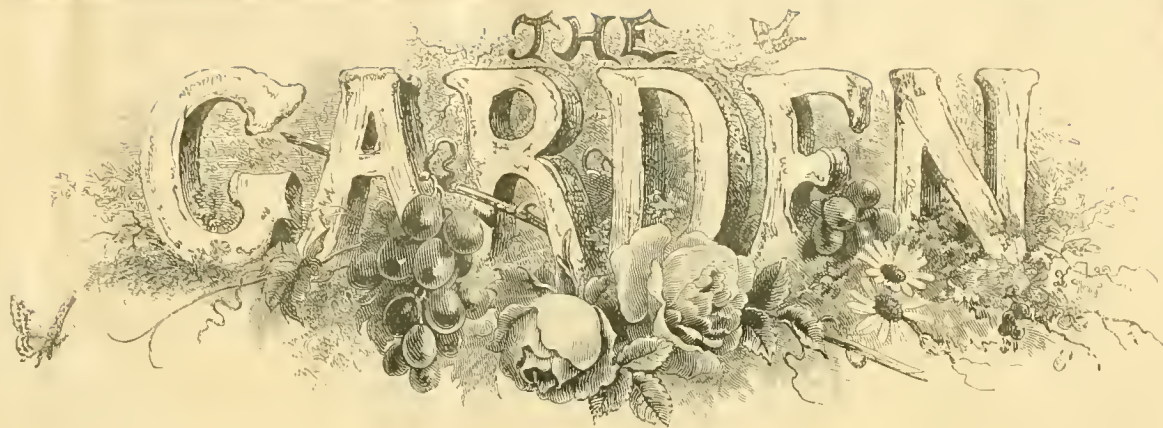
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[THE GARDEN



A SPANISH CHESTNUT IN GREENWICH PARK.



AN

ILLUSTRATED WEEKLY JOURNAL

OF

HORTICULTURE IN ALL ITS BRANCHES.

FOUNDED BY

W. Robinson, Author of the "English Flower Garden."

"You see, sweet maid, we marry
A gentler scion to the wildest stock;
And make conceive a bark of baser kind
By bud of nobler race: This is an art
Which does mend Nature,—change it rather: but
The art itself is nature."

Shakespeare.

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To the Memory of

M. HENRY DE VILMORIN

THE FIFTY-SIXTH VOLUME OF "THE GARDEN"

Is dedicated.

INDEX TO VOLUME LVI.

(Up to week ending December 23.)

Illustrations in Italics.

A.

Abelia uniflora, 510
Abies ab Ochertyre, near Crieff, 483; *Douglasii* *pumila*, 89
Abutilon Golden Fleece, 191, 366, 460; *vexillarium*, 465
Abutilons planted out, 279
Acacia cordata, 139; *part of a plant of*, 139; *decurrens in California*, 335
Acacias in California, 335
Academy, Royal, flowers at, 69
Acalypha Godseffiana, 48; *hispida*, 211, 382; *Sanderiana*, 20
Acantholimon glumaceum, 17; *in Messrs. Veitch's nursery at Exeter*, 17; *venustum*, 71
Acanthus mollis latifolius, 149
Acer californicum aureum, 89, 151; *circinatum*, 342; *heterophyllum*, 342; *palmatum*, 342
Achimenes, 182
Ada aurantiaca, 499
Adenocalymna nitidum, 48
Adenophora liliifolia, 131
Adiantum aethiopicum alatum, 282; *Burni*, 347; *cardiophyllum*, 282; *elegans*, 283; *formosum*, 186; *formosum*, 186; *glaucohyllum*, 106; *in a porous jar*, 106; *tetraphyllum acuminatum*, 282; *trapeziforme*, 282; *Wilesianum*, 106
Adiantums for the cool fernery, 24, 60; *on a wall*, 246
Aerides crassifolium, 22; *multiflorum*, 201; *Warneri*, 21
Agapanthus umbellatus, 286
Agave Woodrowi, 509
Agrilus sinuatus, 35
Alders, the, 503
Allamanda grandiflora, 140; *Hendersoni*, 335
Allamandas, 265
Alnus alno-betula, 505; *angularis*, 505; *autumnalis*, 505; *barbata*, 504; *cordifolia*, 504; *glauca*, 505; *glutinosa*, 504; *g.*, 504; *g. aurea*, 504; *g. imperialis*, 504; *g. laciniata*, 504; *g. laciniata*, 504; *g. macrocarpa*, 504; *g. oxyacanthifolia*, 504; *g. rubro-nervia*, 504; *incana*, 504; *incana*, 504; *japonica*, 505; *laciniata*, 505; *latifolia*, 505; *nervosa*, 504; *oblongata*, 504; *orientalis*, 505; *pinnatifida*, 505; *rugosa*, 505; *serrulata*, 505; *sub-cordata*, 504; *sub-laciniata*, 505; *undulata*, 505; *viridis*, 504
Alonzoa Warscewiczii, 86
Alpinia nutica, 141
Althæa frutex, 159
Alyssum maritimum, 348, 366; *compactum*, 388
Amasonia punicea, 325
Anemia collina, 506; *Dregeana*, 506; *phyllitidis*, 506; *rotundifolia*, 506; *villosa*, 506
Anemias, 506
Amianthium muscatoxicum, 72
Ampelopsis Hoggi, 366
Anætochilli, 148
Anchusa italica, 110
Androsace lanuginosa, 348
Anemone alpina, 237, 270, 299; *alpina*, 237; *blanda*, 329; *and varieties*, 280; *scythica*, 366; *japonica*, a curious form of, 447; *elegans*, 329; *Pulsatilla*, 387; *from seed*, 364
Anguloa eburnea, 240; *Ruckeri sanguinea*, 53
Annals, hardy, in S.W. Scotland, 111
Anomatheca cruenta, 171, 387
Antholyza æthiopica, 427; *vittigera*, 385, 408; *paniculata*, 192
Aphis, the woolly, 200
Apple Adams' Pearmain, 369; *Armored*, 394; *Barsaleg Pippin*, 426; *Beauty of Bath*, 133, 306; *Ben's Red*, 231; *Bismarck*, 312, 357, 462; *Bramley's*, 474; *Cellini*, 166; *Cellini*, 166;

Cornish Gilliflower, 427, 472; *Court of Wick*, 398; *Court pendu Plat*, 493; *Cox's Orange*, 343; *a fruiting branch of*, 462; *Pippin*, 462, 472; *crop*, variability of the, 351; *Devonshire Quarrenden*, 272, 370; *Duke of Devonshire*, 398, 493; *Early Victoria*, 151; *Emperor Alexander*, 34, 272, 395; *exhibitions*, 410; *Flanders Pippin*, 492; *Gascoigne's Seedling*, 462; *Golden Harvey*, 398; *Nonpareil*, 398; *Reinette*, 396; *Russet*, 398; *Hawthornden*, 313, 352; *King of the Pippins*, 303; *Lady Kinloch*, 272; *Mahbot's Pearmain*, 396; *Margil*, 473; *Manks Codlin*, 356; *Manks Codlin*, 226; *Miss Phillimore*, 386; *Mr. Gladstone*, 102; *Newton Wonder*, 474; *Parroquet*, 347; *Pearmain*, 472; *Peasgood's Nonsuch*, 259, 352, 427; *Rambour Franc*, 352; *Red Beitingheimer*, 354; *Schoolmaster*, 394; *Stirling Castle* for small gardens, 353; *Stanway Pippin*, 508; *Sturmer Pippin*, 398; *T. A. Knight*, 231; *tree unhealthy*, 52; *trees*, planting, 397; *Tyler's Kernel*, 302, 311; *Venn's Pippin*, 231; *Washington*, 260, 396; *White Juneating*, 164; *Wormsley Grange Pippin*, 394
Apples and Pears, pruning, 354; *at Ottawa*, 410; *Australian stocks for*, 343; *burnt refuse for*, 260; *dessert*, 398; *dessert*, at the Crystal Palace, 313; *gathering*, 258; *in Hereford*, 67; *late*, 355; *failing*, 234; *keeping*, 357; *on walls*, 493; *reliable early*, 226; *shapely*, 313; *three good*, 272; *well kept*, 3
Apricot trees, lifting and replanting, 271
Apricots, 74; *notes on*, 166
Aralia Sieboldi variegata in flower, 447, 469
Arbutus Unedo Croomei, 447
Arcade, Chailis' fruit tree, 353
Ardisia primulaefolia, 498
Arenaria and *Cypripedium*, 217; *A. montana* and *Cypripedium montanum* at Kew, 217
Aristolochia elegans, 460; *gigas*, 264; *Sipho*, 152
Arpophyllum giganteum, 179
Arrowhead, the great, 108
Artichokes, Globe, 105
Aruns, summer treatment of, 19
Arundina bambuseifolia, 422
Arundinaria anceps, 438; *angustifolia*, 435; *aristata*, 434; *auricoma*, 434; *chrysanthia*, 434; *falcata*, 433; *Falconeri*, 433; *Fortunei*, 434; *F. fol. var.*, 434; *Hindsi*, 434; *H. var. graminea*, 434; *humilis*, 434; *japonica*, 434; *j. at Castlewellan*, 439; *Laydekeri*, 436; *macrosperma*, 434; *marmorea*, 436; *Maximowiczii*, 434; *metallica*, 435; *Nagashima*, 436; *nitida*, 435; *nobilis*, 438; *n. at Menabilly*, 444; *pygmaea*, 436; *racemosa*, 434; *Simoni*, 435; *S. var. striata*, 435; *spathiflora*, 434; *Veitchi*, 435
Arundo conspicua, 211; *donax macrophylla*, 89
Ash, the Mountain, 266; *Weeping*, 178
Asparagus, 451; *cutting*, 56; *feeding*, 196; *market bunch of*, 157; *Purple Argenteuil*, 26; *raising*, growing, and forcing, 156
Aster acris at Whittingham, 251; *Amellus*, 273; *A. and others*, 332; *Distinction*, 308; *Coombe-fishacre*, 364; *F. W. Burbridge*, 273; *grandiflorus*, 427; *John Wood*, 367; *Mrs. W. Peters*, 231; *N.B. densus*, 328; *lavigatus*, 328; *Robert Parker* nanus, 294, 367; *Novi-Belgii nanus*, 232; *Shorti*, 232; *Stracheyi*, 38; *Stracheyi*, 38; *Thomsoni*, 270
Asters, single, 251; *some sorts which have failed*, 232; *Victoria*, 283
Atriplex hortensis purpurea, 251
Angræcum bilobum, 372; *Eichlerianum*, 423; *Scottianum*, 179; *sesquipedale*, 431
Angræcums, wintering small, 361
August in S. Devon, 220

Auriculas, border, 456
Azalea Mrs. Turner, 306; *Vaseyi*, 119; *Vaseyi flowers of*, 119
Azaleas, 6, 306

B.

Baden-Baden, notes from, 63, 212
Bamboos (Dorset coast), 442; *in a seashore Cornish garden*, 399; *the*, 433
Bambusa disticha, 438; *palmata*, 435; *p. at Cast'wellan*, 435; *pumila*, 434; *quadrangularis*, 436; *senanensis*, 435; *tessellata*, 435
Banana, the, in cultivation and commerce, 141
Barkeria elegans, 280
Bean, French, Covent Garden Early Negro, 91; *Ne plus Ultra*, 91; *Perfection*, 91; *Progress*, 90; *stringless*, 91; *fruiting of the Indian*, 269
Beans, as garden breaks, 27; *Broad*, 26, 158; *climbing*, 263; *butter*, 320; *dwarf kidney*, 195; *early Broad*, 25; *French*, 25; *runner*, 196
Bed, a pretty mixed, 384
Beeches in New Zealand, 271
Bees and wasps, 176
Beet, 451; *early*, 26; *Globe-shaped*, 476; *Sutton's Blood Red*, 76; *Turnip r. long-rooted*, 451
Beetroot, a good keeping, 8
Beets, 263
Begonia Adonis, 497; *Aigrette*, 418; *Caledonia*, 385, 432; *carinata*, 279, 391; *Credneri*, 366; *Dregei*, 391, 432; *Ensign*, 497; *Gloire de Lorraine*, 264, 335, 387; *G. de L.*, varieties of, 383; *heracleifolia*, 248; *John Heal*, 497; *M. Wannot*, 39; *Mr. John Caulfield*, 89; *Mrs. Heal*, 498; *Mrs. L. de Rothschild*, 229, 279, 392; *Myra*, 497; *semperflorens gigantea*, 470; *s. g. rosea*, 497; *socotrana*, 489; *s.*, hybrids of, 497; *Sylvia*, 425, 498; *Winter Cheer*, 498; *Winter Gem*, 497
Begonias and dry weather, 218; *at Kirkconnel*, N.B., 232; *basket*, 469; *where they grow*, 153; *winter-flowering*, 248
Belladonna Lily and *Peruvian Swamp Lily*, 223; *and Zephyranthes at Kew*, 223
Berks, November flowers in, 391
Biennials, raising, 334
Bignonia radicans, 401
Birds and fruit growing, 446; *and the Apple and Pear crops*, 259; *in gardens*, usefulness of, 403, 454
Blight, American, treatment of, 396; *woolly aphis*, &c., 473
Books—
"A Text-Book of Plant Diseases", 75
"Album des Orchidées", 47
"Calendar of Flowering Trees and Shrubs", 365
"Catalogue of Plants in Abbotsbury Gardens", 470
"More Pot Pourri", 327
"Murray's Handbook of Somerset", 48
"Murray's Handbook of Wilts and Dorset", 293
"The Birds of Berwickshire", 292
"The Flora of Cheshire", 75
"The Solitary Summer", 169
"The Strawberry Manual", 340
"The Teaching Botanist", 340
"Vegetables for Exhibition and House Supplies", 328
Borders, flat *r. sloping*, 409, 476
Bougainvillea glabra in Hyde Park, 256
Bouillie Bordelaise, 365
Bouvardia Humboldtii corymbiflora, 140; *grandiflora*, 191; *odorata alba*, 509; *President Garfield*, 383
Bouvardias, 279

Bramble, the Parsley-leaved, 232
 Brassavola glauca, 423
 Brassia Keiliana, 21
 Brier, Sweet, Anne of Geierstein, 14, 54; Meg Merrilies, 317
 Briers, Lord Penzance's hybrid, 69
 Brightness in the winter, 496
 Broccoli crop, the autumn, 195; heeling in, 411; late, 478; planting, 44; self-protecting, 25
 Brodiaea coccinea, 4
 Broom, the Spanish, 120
 Brussels Sprouts, 293, 478; quality in, 450
 Buckthorn, the Sea, 427
 Budding and grafting, some results from, 175
 Buddleia Colvillei in Surrey, 4; variabilis, 139
 Bulbs, Californian, for forcing, 299; planting small and choice, 390
 Bupthalamum salicifolium, 501

C.

Cabbage, early spring, 196; old Essex, 478; pest, a peculiar, 76; pickling, 412; spring sowing of, 158; St. Martin's, 386
 Cabbages in November, 26; Savoy, 320
 Cæsalpinia Gilliesi, 294
 Caladium A. Siebert, 50; Mme. Jean Dabowski, 89; Mitjana, 50
 Calanthe Veitchi, feeding, 314; veratrifolia, 241; vestita luteo-oculata, 430
 California, notes from, 49, 503; some recent flower creations in, 197
 Callistephus hortensis, 348, 367, 457, 501; sinensis, 362, 385, 427
 Calochorti at Wisley, 58
 Campanula balchinensis, 392; betulæfolia, 131; Burghalti, 31; carpatica pelviformis, 131, 152; c. (Riverslea var.), 51; cenisia, 71; excisa, 151; G. F. Wilson, 71; grandis alba, 72; Hendersoni, 171; isophylla, 129; Mariesi alba, 110; Mayi, 89, 151; mirabilis, 111; persicifolia, 71; p. alba grandiflora, 32; Profusion, 171; pulla, 108; p. at Raimes Lodge, 32; pyramidalis, 211; p. alba, 447; soldanella-flora fl.-pl., 111; Vidali, 132, 140; Waldsteiniana, 92; Warleyi, 89, 92
 Campanulas, Peach-leaved, 19
 Canarina campanulata, 489
 Canker fungus, the, 440; is potash a cure for? 347
 Canna Alemana, 240; Beauté Poitevine, 190
 Cannas in tubs, 252
 Canterbury Bells, 41
 Canterbury, hailstorm at, 51
 Caragana arborescens, 177; nana, 177; pendula, 177; Redowski, 177; Redowski in the Royal Gardens, Kew, 177; aurantiaca, 177; Chamlagu, 177; frutescens, 177; angustifolia, 178; jubata, 178; microphylla, 178; pygmaea, 178; spinosa, 178
 Cardiospermum Halicacabum, 382; Halicacabum, 382
 Cardoon Blanc d'Ivoire, 293
 Cardoons, 27
 Carduncellus pinnatus, 273
 Carica Papaya, 470
 Carnation Heather Bell, 50; Isinglass, 91; Lady Gerard, 9; Leopold de Rothschild, 155; Miss Audrey Campbell, 418; Mrs. G. Foster, 330; Mrs. L. de Rothschild, 483; Reginald Godfrey, 324; Rosalind, 50; The Baron, 50; Trojan, 9
 Carnations, 20; and Picotees at the Crystal Palace, 107; autumn planting, 240; border at Chelsea, 87; failing, 40; in winter, 480; old and new Tree, 383; rust on, 324; Tree, housing, 335; yellow ground and fancy, 131; 1899, 153
 Carrot Early Gem, 411; Matchless Scarlet, 320; Short Horn, 8
 Carrots, 222; early stump-rooted, 496; French, 320; long c. short, 496; winter and spring, 25
 Carsethorn, a note from, 448
 Caryopteris mastacanthus, 268, 269, 294, 326, 329, 427, 447; m. albus, 465
 Cassia corymbosa, 140, 329
 Castor-oil plants, 315
 Catalpa hybrida, 79; syringæfolia fruiting, 252
 Catalpas fruiting, 401
 Catasetum callosum, 371; Christyanum, 423
 Caterpillars and Gooseberries, 353; the plague of, 68

Cattleya Aclandiae, 20; aurea, 202; bicolor, 314; Brymeriana, 479; citrina, 465; Dowiana aurea (Little's var.), 307; elatior, 508; Eldorado, 53; Gaskelliana formosa, 9; gigas, 47; guttata Leopoldi, 181; Hardyana, 360, 479; Harrisoniae, 202, 479; H. alba, 49; Imperator, 479; intricata, 479; Kienastiana Aurora, 229; Krameriana, 479; labiata, 385; l. at Fir Grange, 431; l. autumnalis, 314; l. Gilmouriae, 385; l. Princess of Wales, 385; luteola, 360; Luddemanniana alba, 229; Maggie Raphael, 466; Massiana, 479; Measuresi, 479; Mendeli, 202; Mossiae var. Lawrenceae, 9; Mrs. J. W. Whiteley, 425; Patrocini, 479; Princess, 346; resplendens, 479; Schofieldiana, 94; venosa, 479; vestalis, 425; Victoria Regina, 479; weedonensis, 267; Whitei, 149, 181, 479
 Cattleyas, watering, 147
 Cauliflower grub, the, 44, 56; Veitch's Autumn Giant, 357
 Cauliflowers, early, 44
 Ceanothus americanus, 137; a., group of, in the Royal Gardens, Kew, 137; azureus, 137; Carmen, 138; Ceres, 138; cuneatus, 138; dentatus, 138; divaricatus, 138; Gloire de Versailles, 137; integerrimus, 138; papillosus, 138; rigidus, 138; Sceptre d'Azur, 138; thyrsiflorus, 138; Veitchianus, 138; velutinus, 138; virginialis, 137
 Ceanothuses, 137
 Celery fly, the, 270; grubs in, 348; late, 338; Major Clarke's Solid Red, 478; transplanting, 26, 159; trouble with the, 105; watering, 158
 Celosia pyramidalis, 427
 Celosias, 383
 Centaurea americana alba, 150; moschata alba, 71
 Cereus cylubrinus x Phyllocactus Ackermannii, 196; triangularis, 366
 Ceropogia Woodii, 279
 Cestrum aurantiacum, 489
 Chamærops Fortunei in fruit, 388
 Chambers Court, Tewkesbury, 501
 Chancery Lane, oasis in, 408
 Chelone obliqua, 211
 Cherries on walls and in the open, 75; the, 233
 Cherry Late Duke, 67, 312; Morello, bush trees of, 168; Noble, 90; Rivers' Early Black, 35; the Koslov Morello, 271; the Sand, as a stock, 176
 Chestnut, pruning the Horse, 310; the Horse, 23; the Horse, 23
 Chimonanthus fragrans, 122; fragrans, 123; nitens, 123
 Chironia ixifera, 265
 Choisy ternata, 402
 Chrysanthemum, a plea for a hardier, 429; Admiral Symonds, 447; Ambroise Thomas, 346; Australian Gold, 380; Australie, 382; Chatsworth, 469; Chrysanthemist Brunt, 417; Clinton Chalfont, 417; Comte de Germiny, 458; Cullingfordi, 380; cuttings, 487; C. W. Richardson, 494; decline of the incurved, 380; Edith, 469; Edith Pilkington, 368; Emily Silsbury, 291; Etoile de Feu, 391; Firefly, 417; Fleur de Marie, 488; Florence Molyneux, 346, 368; François Villermot, 292; General Symons, 407, 430; George Towers, 407; Gloire de Rocher, 381; Golden Sheaf, 415; growing round Norwich, 291; H. J. Jones, 417; Hair Wonder, 415, 488; Hanwell Glory, 417; Harvest Home, 292; Hooper Pearson, 347; J. R. Upton, 469; Jeanne Délaux, 429; Jules Mary, 294; Kathleen Rogers, 345; Klondike, 350; Lady Fitzwygram, 236; yellow var., 269; Lady Temple, 368; Le Grand Dragon, 347, 382; Lemon Queen, 346; Little Pet, 407; M. Louis Remy, 346, 430; Marie Calvat, 380; maximum Triumph, 232; Miss Alice Byron, 346, 348, 368; Miss Edith Pilkington, 347; Miss Godmark, 368; Miss Rose, 427, 494; Mme. Carnot, 292; Mme. C. Desgranges, 509; Mme. E. Roger, 458; Mme. R. Cadbury, 467; Mme. Liger Ligneau, 269, 291; Mr. A. H. Hall, 292, 368; Mrs. Alfred Tate, 425; Mrs. Burrell, 294; Mrs. F. B. Garrard, 407; Mrs. Filkins, 430; Mrs. Grogan, 407; Mrs. Hawkins, 323;

Mrs. Langtry, 494; Mrs. Mease, 417; Mrs. White-Popham, 346, 430; Mrs. Wingfield, 350; Mychett White, 292; notes, 115; Oscar, 467; Peter the Great, 382; Piercy's Seedling, 232; Princess Victoria (yellow var.), 509; Queen of the Earlies, 292; R. Hooper Pearson, 350, 470, 494; Ralph Hatton, 407; rust, 380, 489; shows, berried plants at, 418; shows, foreign, 345; shows, prizes at, 457; sports, 494; Sœur Dorothee Souille, 382; Sœur Melanie, 417; Soleil d'Octobre, 323; Val d'Andorre, 427; Vicar of Leatherhead, 407; Wattle Blossom, 345; Western King, 469; Winter White, 509
 Chrysanthemums at Chelsea, 416; at Earlwood, 350; at Framfield, 414; at Lewisham, 416; at Swanley, 381; at the Aquarium, 414; at the Drill Hall, 351; Australian seedlings, 291; bush, 487; Calvat's novelties, 487; coddling, 457, 494; border, at the R.H.S., Chiswick, 430; disbudding, 458; discarding old varieties, 350, 416; early flowering, 272, 322; exhibiting large blooms in vases, 487; exhibiting single, 488; fed r. unfed, 323, 350; good old, 487; grown in Moss, 430; hairy, 416; hardy, 488; how to use large exhibition blooms of, 345; in open air in December, 458; in Peach houses, 323; in the parks, 310; in the west of England, 489; late, 488; M. Nonin's seedling, 414; naturally grown, 382; new, at Heywood, 381; new French seedling, 414; notes on varieties of, 415; October, 381; pompon, 417; prospects of the season, 349; rust on, 350; seasonable notes, 236; single, 416, 429; Snowdrop and Primrose League, 469; some new, 488; standing the pots on grass, 212; undisbudded, 458; unhealthy, 132; varieties of, 458; yellow, of recent origin, 381
 Chysis laevis, 179
 Cibotium Schiedeii, 283
 Cimicifuga racemosa, 110
 Clarkia elegans Salmon Queen, 71
 Clematis cirrhosa, 457, 490; integrifolia, 194; La France, 257; Viticella alba, 171
 Clematises, 38; a remedy for the disease in, 163
 Clerodendron fallax, 139; trichotomum, 172, 367, 387, 506
 Clethra alnifolia for market, 88
 Climber, a beautiful, 169
 Clivia miniata citrina, 338
 Clove, the old Crimson, 154, 191
 Coal ashes for Potatoes, 320, 357
 Cochlioda Noezliana, 465; rosea, 465; sanguinea, 465; vulcanica, 465
 Cochliodas, 465
 Celogyne cristata in winter, 431; pandurata, 22; speciosa, 465
 Celogyne, winter treatment of, 371
 Colchicum autumnale album plenum, 294; Sibthorpi, 391, 427, 469, 510
 Coleus Beckwith Gem, 48; thyrsoides, 82
 Columbines, hybrid, 31
 Commons and footpaths, public, 510
 Conference mania, the, 490, 510
 Convolvulus Cneorum, 428; mauritanicus, 269
 Cordyline australis, 203; in flower, 203
 Cordylines at Penjerick, 424
 Coreopsis grandiflora, 58
 Coris monspeliensis, 110
 Cornus macrophylla, 89
 Coronilla iberica, 32
 Corsham Court, trees at, 505
 Cortaderia Lambleyi foliis variegatis, 333
 Cosmos, new seedling, at Ventura, California, 197
 Costus igneus from seed, 141
 Cottage gardens, lock and ferry, 212
 Cowslip, the double, 457
 Crabs, some ornamental, 400
 Crassula lactea, 489
 Crinum Powelli, 237, 457; roseum, 264
 Crocus asturicus, 392; autumn, in grass, 328; cancellatus, 329; hyemalis, 489; laevigatus, 388; longiflorus, 388; ochroleucus, 447; speciosus Aitchisoni, 385
 Crops, fruit and vegetable, 247; green, the winter and spring, 76
 Croton Eugenie Chantrier, 496
 Crowea latifolia, 191
 Crown Imperial, dark-flowered, 390; Imperials, 358

Crystal Palace fruit show, notes on the, 356
 Cucumber Beckett's Achievement, 231; Royal Osborne, 27
 Cucumbers, market, 293; winter, in pots, 136
 Cupressus Lawsoniana Wisseli, 150
 Curculigos, 418
 Curcuma Roscoeana, 324
 Currant, a profitable Black, 493
 Currants, Black, a moist root-run for, 167; Black, pruning, 3; on north walls, 312
 Cyclamen, double, 447; hederifolium, 269; repotting, 265; seed, sowing, 249
 Cyclamens, 431; repotting, 497
 Cynoches maculatum, 360
 Cymbidium eburneum, 179; longifolium, 466; Traceyanum, 42, 465
 Cyperus fertilis, 48
 Cyrtanthus amandum, 280; Arthurianum, 423; Calceolus, naturalising, 502; Captain Holford, 189; Charlesworthi, 314; concho-callosum, 508; Exul, 179; Fred Hardy, 360; grande, 240; Hera Euryades, 466; Hera Euryades var. splendens, 508; insigne at Syon, 488; i. giganteum, 404; Leeanaum, 479; Lord Roberts, 508; Milo (Westonbirt var.), 425; Parishii, 213; Sanderianum, 118; Schillianum, 49; Sedent, 280; S. candidulum, 93; Spicerianum nigrescens, 423; Stoner candidum, 49; superbiens, 93
 Cyrtanthi in flower, 139
 Cytisus nigricans, 341; præcox, 37; præcox, 37

D.

Dacrydium Franklini at Penjerick, 413
 Daffodil seeds, sowing, 87
 Daffodils, 315; two Dutch, 222
 Dahlia Augustus Hare, 268; Ajax, 150; Antler, 150; Britannia, 131; Cheerfulness, 230; Daisy, 230; Eddie Olbein, 230; Eileen Palliser, 300; Emperor, 230; Empress, 230; Ethel, 317; Fantasy, 195; Flame, 230; Green's White, 230, 251; Innovation, 230; Island Queen, 272; Loadstone, 230; Magnificent, 131, 256, 299; Mary Service, 256; Mayor Tuppeny, 230; Mayor Weston, 230; Maurice T. Walsh, 230; Mme. Medora Henson, 268; Mrs. J. H. Luscombe, 190; Mrs. J. J. Crowe, 229, 231; Mrs. John Goddard, 131; Mrs. Sanders, 269; Mrs. Stephenson Clarke, 190, 218; National Society's second exhibition, 283; Nellie Nicholson, 230; Red Rover, 229, 231; show, the Aquarium, 269; Sylph, 150; Uncle Tom, 230; Veronica, 230
 Dahlias, a feast of, 255; and Marigolds in the open, 427; at the Westminster Aquarium, 317; awarding certificates to new, 238; Cactus, 215, 256; at the Crystal Palace, 217, 256; caterpillars on, 152; for garden decoration, 194; in November, 457; new, at the Crystal Palace, 250; new Cactus, 316; pompon, 316; pompon, at Chiswick, 284; selecting, 300
 Daisies, Michaelmas, 390
 Damsons and Bullaces, 312
 Daphne indica, 483
 Datura Stramonium, 362
 Davallia epiphylla, 232; illustris, 9; solida, 282
 Delphinium Jose Marie de Heredia, 89; Michael Lando, 50; Sir W. Scott, 9; sulphureum, 91
 Delphiniums, seedling, 41
 Dendrobium Aphrodite, 148; aqueum, 431; aureum, 371; bigibbum, 332, 500; chrysanthum, 213; Colognyne, 385; cucullatum, 119; d'Albertis, 180; Dalhousianum, 240; Dearei, 94; formosum, 180; giganteum, 331, 371; fimbriatum-oculatum, 72; infundibulum, 404; nobile, 314; n. Cooksonianum, 179; n., curious sport on, 118; sanguinolentum, 480; spectabile, 507; superbiens, 241; superbum, 21, 361; Wardianum, 53
 Dendrobiums, notes on, 94
 Dendrochilum Lobbianum, 371; filiforme, 181
 Deutzia discolor purpurascens, 38; Lemoinei, 4, 32; in S.W. of Scotland, 71
 Devon, flowering climbers in, 216; November flowers in, 388; September climbers in, 300; South, October climbers in, 384; trees and shrubs in bloom in, 37

Dianthus alpinus, 214; arenarius, 214; barbatus Elizabeth, 50; cæsius, 214; callizonus, 215; deltoides, 214; Fettes Mount, 4; fragrans, 215; gallicus, 214; glacialis, 214; Heddowigi for button-holes, 300; Knappi, 215; masmenæus, 215; neglectus, 214; petraeus, 215; superbus, 215; sylvestris, 215
 Dicksonia antarctica, 283; in the open air at Penjerick, 418
 Didymochlæna truncatula, 282
 Digitalis lanata, 62
 Dipladenia Sanderi, 191
 Disa Clio superba, 89; grandiflora Barrelli, 179
 Dracæna indivisa Schneideri, 9; Sanderiana viridis, 366; The Queen, 425
 Drosera dichotoma, 382
 Drought, break up of the, 249
 Dublin, a blizzard in, 388; a note from, 484
 Dutchman's Pipe, the, 152

E.

Echinacea purpurea, 152
 Edinburgh Botanic Gardens, 333
 Elms, the two, 38
 Eucomis punctata, 252, 329; in the open, 299
 Epidendrum arachnoglossum, 21; aurantiacum, 181; Brassavola, 118; cuspidatum, 202; evectum, 371; falcatum, 213; purum, 369; radiatum, 46; vitellinum, 95; Wallisi, 314
 Epi-Lælia Charlesworthi, 49
 Epiphyllum Russellianum, 202; truncatum, 202; t., a fine, 427
 Epiphyllums, 202, 502
 Episode, an, 312
 Eranthemum pulchellum, 388
 Eremurus Elvæ in Mr. Hindmarsh's garden at Alabank, Alnwick, 188; in the north, 188; Elwesianus in Westmoreland, 132; himalaicus, 42
 Erigeron glaucus, 17; speciosus superbus, 71, 489
 Eriogonum sub-umbellatum, 4
 Escallonia langleyensis, 38
 Eschscholtzia crocea, 427
 Eschscholtzia, late-sown, 366
 Eucharis amazonica, 264, 391, 432, 483; burfordensis, 229
 Euphorbia corollata, 195; fulgens, 509; splendens, 122
 Euphorbias planted out, 279
 Exacum macranthum, 388

F.

Fabiana imbricata, 4
 Fallacy, the, as to "matters of taste," 453
 Falsia japonica ripening seed, 31
 Fern spores, 247, 283, 424; sowing, 186; the Royal, 91
 Ferns, basket, 449; flowering, 506; for decorating rooms, 450; Gold and Silver, 13; hardy, 424; non-British, 52; in Yorkshire, 13; notes on hardy, 450; on cork, 122; on tree stumps, 13; specimen, 282; sunlight for, 424, 449; Tree, and Japan Musa in an old quarry, Cornwall, 393
 Ferula tingitana, 51
 Figs casting their fruit, 397; late, 356, 462; open-air, 176, 257; in Wales, 312
 Filbert, the Purple, 227
 Filberts and Cobnuts, 474
 Fir, the Douglas, 271
 Fittonias, 279
 Flower garden, a plea for simplicity in the, 107; notes, 85, 155, 188, 216, 285, 456; gardening, grotesque, 330
 Flowers, December, 469; hardy, at Summerville, Dumfries, 154; new soil for, 88; Japanese ways of arranging, 97; outdoor, for cutting, 18; thrips on, 191
 Forestry question, the, 24
 Fraxinus excelsior var. pendula, 178
 Freesias, 279; failing, 335, 383
 Fritillaria pluriflora, 92
 Frost in cold frames, 496
 Fruit and vegetable crops, 115, 144, 160, 184, 204, 224, 277, 296; "appropriation," 290; at Norwich show, 463; borders, seaweed for, 311;

borders, sloping, 493; exhibiting, 235, 271, 313; flavour in, 65; growers, puzzled amateur, 343; growing on overhanging trees, ownership of, 172; house, cleaning, 356; rabbits, protecting from, 492; rooms, 493; spraying, 100; tree arcades, Challis's, 353; tree arcades showing mode of protecting fruit, 355; tree borders, loose, 227; trees, cropping under, 166; trees, corrugated iron fence for, 235; trees on north walls, 73; trees, summer pinching of, 209; young wood on old, 3; rottenness in, and mummification in Peaches, 99; worn-out, 101
 Fruiting of the Indian Bean, 269
 Fruits, hardy, work among, 24, 83, 123, 163, 204, 243, 321, 359, 399, 439, 482; under glass, work among, 7, 45, 64, 103, 143, 183, 224, 261, 339, 379, 420, 461, 502
 Fuchsia fulgens planted out, 384
 Fuchsias in S.W. Scotland, 273; in the flower garden, 215; greenhouse, 71
 Funkia subcordata grandiflora, 390

G.

Gaillardia Langport, 19
 Gaillardias, 72
 Galanthus Rachelæ, 469
 Galeandra Baueri, 241; nivalis, 21
 Galega officinalis, 149
 Galtonia candicans, 211
 Garden, a lawn, in Gloucester, 501; claim to produce of, 252; in a Cornish, 393; in a Cornish, 404; notes from a Cornish, 52, 111, 191, 388; planting a, 408
 Gardens, Cornish cottage, 267; window, prizes for, 372
 Garrya elliptica in East Lothian, 251
 Genista cinerea, 38
 Gentiana asclepiadea, 287, 294; alba, 152; linearis, 152; tibetica, 151
 Geranium cinereum album, 91, 131; Crystal Palace Gem, 195; Henry Jacoby, 131; Magenta Queen, 256; Phæum, 4
 Geraniums for winter flowering, 88
 Gerbera Jamesoni, 272, 385
 Geum Heldreichi, 71
 Gillenia trifoliata, 17, 88
 Gladiolus bulbs, keeping, 456; Burne-Jones, 150; early, Ackermani, 40; F. Pavnter, 150; Henri Vaudrier, 150; James H. Veitch, 190; Jane Dieulafoy, 150; Lady Montagu, 159, 171
 Glasshouse, a useful, 337
 Gleichenia circinata, 106
 Glen, The, Innerleithen, 57; a view at, 57
 Gloriosa virescens, 391
 Godetias, self-sown, 71
 Gongoras, 371
 Gooseberries and caterpillars, 355; late, 257; on trellises, 74; ripe, 199
 Gooseberry caterpillar, the, 28; Green Champagne, 199; Keepsake, 65; Leveller, 33; Pitmaston Greengage, 167; Rough Yellow, 102, 500; Telegraph, 65
 Gooseberry trees, caterpillars on, 34; White-smith, 257
 Graft, a curious, 272
 Grape Buckland Sweetwater, 344, 369; Foster's Seedling, 200, 258; Golden Champion, 235; Gros Colman, 199; G. C. on Foster's Seedling, 353; Gros Guillaume, 67, 168; Lady Downe's, 133; Lady Hastings, 90, 167; Lady Hutt, 35; Madresfield Court, 113; Mrs. Pearson, 331; Reine Olga, 347
 Grapes colouring, 69, 167; decorating exhibition, 394; early and late, 227; exhibiting, 397; exhibition, 235; Gros Maroc and Gros Colman, 354, 474; late, keeping in winter, 463; outdoor, in East Anglia, 227; white, staging at shows, 463; winter, 397
 Grappenhall, view in the conservatory at, 497
 Grasses, silver variegated Pampas, 332
 Greens and caterpillars, 478; winter, 378, 476
 Greenway, South Devon, 6
 Gunnera scabra, 283, 363
 Gunnersbury House, 275; the lake at, 275
 Guiterczia Euthamie, 132
 Gymnogramma schizophylla, 247
 Gypsophila paniculata, 108; a double, 187

H.

- Halesia diptera, 5
 Halimodendron argenteum, 32
 "Harper's Magazine" v. artistic gardening, 372
 Hatfield, hardy flowers at, 111
 Hedychium coronarium, 140, 418
 Helenium autumnale superbum, 216; nudiflorum, 317; striatum, 211
 Helianthemum amabile fl.-pl., 298, 329
 Helianthus decapetalus, 192; H. G. Moon, 385; orgyalis, 272; rigidus semi-plenus, 211
 Heliconia aureo-striata, 88; illustris, 88; metallica, 88; Sanderi, 88; Sanderi, 88; spectabilis, 88
 Heliophila scandens, 459, 488
 Heliopsis patula, 31; Pitcheriana, 251
 Heliotropes in the flower garden, 300; new, 279
 Helleborus altifolius, 509
 Hemerocallis aurantiaca major, 17, 251, 299; Pioneer, 71
 Hesperis matronalis lilacina plena, 4
 Heuchera brizoides, 151; brizoides, 86
 Heucheras, the, 86
 Hibiscus Archeri, 488; californicus, 231; celestis, 326, 401; Manihot, 232, 324
 Hippophae rhamnoides, 427
 Hollyhock Black Knight Improved, 150; the, in Regent's Park, 315
 Hollyhocks, group of single, in Regent's Park, 315; single, 129, 154
 Honeysuckles, the bush, 341
 Horminum pyrenaicum album, 366
 Houstonia cerulea, 72
 Humeas, finely-grown, 32
 Hyacinths, early Roman, 383; in pots, 182
 Hyacinthus candicans, 109, 171
 Hydrangea Hortensia, 140; in a pot, 19; patio-laris, 5
 Hydrangeas in a wood in Cornwall, 398; in pots, 19
 Hypericum Moserianum, 159

I.

- Incarvillea Delavayi, 32; D. in shade, 52; grandiflora, 22, 59, 111
 Incarvilleas, 154; in Cornwall, 251
 Insecticide, a good, 262
 Insecticides, 67
 Insects and Strawberries, 66, 164
 Ipomaea Leari, 20
 Ireland, M. L. Marliac's Water Lilies in, 298
 Iris albo-purpurea, 500; assyriaca, 149; German Beauty, 88; gigantea, 4; Kämpferi, 71, 109; Robinsoniana, 71; sofarana, 486; sofarana, 486; Straussii, 149; stylosa, 489; Susiana at Tynninghame, 270; the Wedding, 71; tingitana, 42, 91
 Irises, a Japanese arrangement of, 102; in a Japanese bowl, 103; Spanish, 16; S. and English, 456
 Isle of Wight, plants in bloom in, 390
 Isoloma Vicomte A. de la Combe, 483
 Ixia viridiflora, 32, 92
 Ixias in open beds, 362
 Ixora macrothyrsa, 391

J.

- Jacobinia chrysostephana, 432
 Jasminum nudiflorum, 500
 Jasmine, the night-flowering, 417
 July in South Devon, 120; in 1899, 84
 June in S. Devon, 79
 Justicia calycotricha, 432

K.

- Kales, the vagaries of, 262
 Kew, flowers in the rock garden at, 18
 Kirkconnel, a note from, 58
 Kitchen garden, room in the, 105
 Kitchen garden, work in the, 7, 24, 45, 64, 83, 103, 124, 144, 163, 183, 203, 223, 243, 261, 282, 302, 321, 339, 359, 380, 400, 419, 440, 460, 481, 503
 Kitchen gardens, cropping small, 374

- Kniphofia hybrida Lachesis, 171; multiflora, 348; Nelsoni, 211, 272; R. C. Affourtit, 251; Triumph, 269; Tucki, 458, 489
 Kniphofias, 458; at Bill, E. Lothian, 251

L.

- Laelia amanda, 423; anceps, 213; Crawshayana, 479; crispa, 94; Dominiana Fire King, 9; Dormaniana, 360; elegans Mastersi, 181; e. Stelzneriana, 332; Eyermaniana, 479; Finckeniana, 479; Gouldiana, 479; Jongheana, 93; leucop-tera, 479; lilacina, 479; Mrs. M. Gratrix, 346; pumila, 240, 431; purpurata Mrs. R. I. Measures, 46; Mrs. R. I. Measures, 46; p. Williamsi, 54; rubescens, 331; tenebrosa gigantea, 49; t. var. Victor Warburton, 9; venusta, 479; Wyattiana, 479
 Lælio-Cattleya Adolphus, 49; albanensis, 478; amanda, 478; Aphrodite, 46; Arnoldiana (Pickering Lodge var.), 54; Bertha Fournier, 149; callistoglossa (Leon's var.), 229; Domini-ana langleyensis, 142; Dominiana langleyensis, 143; var. Frances Mary, 47; Duchess of York, 346; Duvaliana, 49; elegans, 478; Eudora var. eximia, 9; Gottoiana, 479; Martineti, 49; Owenia, 479; Pittiana, 479; porphyrites, 479; Statteriana, 479; Wellsiana ignescens, 508; Wiganae, 149
 Lantanas in the flower garden, 187
 Lapageria rosea and L. alba, 310
 Larkspurs for cutting, 58
 Lathraea squamaria, 51
 Lathyrus Drummondii, 194; latifolius albus, 192
 Lavatera assurgentiflora, 470

LAW—

- May v. Thyne, 70
 Lawn-mowers and sweepers, 117
 Lawn with trees in natural form (Cassibury), 295
 Leaf down a cause of hay fever and cold, 292
 Leaves prematurely falling, 183
 Leeks, 263; in June, 8
 Leptotes bicolor, 21
 Lettuce Alexandra White Cos, 242; Cabbage, 56; Continuity, 25, 44, 159; in hot, dry summers, 56; White Chavigny, 262
 Lettuces hearting, 196; in trenches, 56
 Leucojum autumnale, 188; roseum, 256, 270
 Liatris pycnostachya, 315
 Light, all, 118
 Lilies and Irises at the Temple, 38; Burmese, 187; July, 130
 Liliun auratum, imported, 418; a. vittatum variety, 129; Batomania, 155; Burbanki, 71; candidum, lifting, 155, 218; chalcadonicum, 92, 132, 155; colchicum under trees, 107; giganteum, 128; group of, at Hagdon Hall, Bourne-mouth, 128; Humboldtii, 237; longi-florum from Japan, 432; Martagon album, 71; monadelphum, 72; neilgherrense, 286; parda-linum, 85; rubellum, 16, 255, 316; sutchuense, 363; speciosum, 238; s. album novum, 232; s. Mel-pomene, 211; Szovitzianum, 85; testaceum, 59, 92; Thunbergianum Orange Queen, 4; Wallichianum, 239
 Lily disease, the white, 155; of the Valley, 335; in flower, 496; in Norfolk, 16; the double-flowered Martagon, 107; the Madonna, 255; the M. in a Sussex garden, 255; the Panther, 85; the Scarborough, 325
 Lime and Cherries, 474
 Limncharis Humboldtii not flowering, 300
 Lindenia rivalis, 324; rivalis, 324
 Linum flavum, 366
 Litobrochia vespertilionis, 283
 Lobelia Carmine Gem, 251, 300; for stock, 334; Queen Victoria, 191; Tupa, 252
 Lobelias for stock, 254, 384; from seed, 384; tall-growing herbaceous, 182
 Loch Kishorn, Ross, N.B., 117
 Locust tree, value of the, 57
 Logan Barry, the, 354; for prosering, 313
 Lonicera Alberti, 341; bella, 341; ciliata, 341; cœrulea, 341; c. var. grandiflora, 341; fragran-tissima, 341; gracilipes, 341; Ledebouri, 341; iberica, 341; Maximowiczii, 341; minutiflora, 341; Morrowi, 341; notha, 341; oblongifolia, 341; orientalis, 341; quinquelocularis, 341;

- Ruprechtiana, 341; salicifolia, 341; Standishi, 341; tatarica, 341; xylostium, 341
 Luculia gratissima, 498
 Lupines, herbaceous, at Edinburgh, 4; Tree, 16
 Lupinus polyphyllus Somerset, 19
 Lycaste Barringtonia, 372; Deppei, 22; lanipes, 147

M.

- Machine, a labour-saving, 393
 Magnolia Lenne, 68; at Enys, Cornwall, 68
 Majorca, old Olive trees in, 326; old Olive trees at, 326
 Malus angustifolia, 401; baccata, 400; coronaria, 401; crataegifolia, 402; floribunda, 401; Halle-ana, 401; Niedzwetzkyana, 401; prunifolia, 401; Ringo, 401; rivularis, 402; Scheidekeri, 401; spectabilis, 401; Toringo, 401
 Manettia bicolor, 6, 383; cordifolia, 6; micans, 7
 Manettias, 6
 Maple, hardness of the Japanese, 388
 Maples, the, 342
 Marigold Silver King, 218
 Market gardens, 152
 Marrows, Vegetable, 196; without manure, 478
 Masdevallia amabilis, 499; Barlacana, 21; calura, 423; Carderi, 179; Chimera and M. Back-housiana, 213; Davisi, 314; infracta, 181; leontoglossa, 181; muscosa, 93; nycterina, 22; othodes, 53; radiosa, 147; Rushtoni, 9; tovarensis, 371, 447
 Maxillaria grandiflora, 371
 Mazus Pumilio, 71, 91
 Meconopsis heterophylla, 480
 Medinilla magnifica, 265
 Melianthus major and M. pectinatus, 455; M. pectinatus, 455
 Melon award, 172; Best of All, 233; Ganton Scarlet, 115, 260; unnamed var., 151; Royal Favourite, 34; Scarlet Premier, 257; William Tillery, 28
 Melons, canker in, 167, 253
 Menabilly, 475; Arthrotoxis luxifolia at, 477; Dracina in fruit at, 475; Hydrangeas at, 484; Royal Fern and Gunnera at, 480; the Mexican Pine at, 480
 Michaelmas Daisies, 334, 455, 457
 Michauxia campanuloides, 110; Tchihatchowi, 110
 Microlepis hirta cristata, 282; platyphyllo, 282
 Mignonette, open-air, in November, 501
 Miltonia Clowesi, 314; Regnelli, 53
 Mimulus Burnettii, 41
 Momordica Charantia, 382
 Monarda didyma, 155
 Montbretia crocosmiflora, 269; Rayon d'Or, 231
 Montbretias, hybrid, 389
 Mormodes pardinum, 371
 Mortlake, seed trials at, 112
 Moss litter, 438
 Munches, Dalbeattie, a note from, 181
 Mushroom winter culture in the open air, 495
 Mushrooms all the year round, 495
 Myosotidium nobile, 228; nobile, 228
 Myosotis, propagating, 40
 Myricaria germanica, 465
 Myrtle, the Box-leaved, in a tub at Gunnersbury House, 373

N.

- Nanodes Medusa, 119
 Narcissi, new, 162
 Narcissus Bishop Mann, 59; a group of, 59; cyclamineus major, 217
 Nectarine Cardinal, 28; Spenser, 396
 Nectarines, new, 28
 Nepenthes at Kew, 329; at the Drill Hall, 191; Balfouriana, 149
 Nerine Fothergilli major, 459; Fothergilli major, 459; japonica, 384, 392; Manselli, 378; Miss Willmott, 386; Mrs. Berkeley, 386; Mrs. God-man, 386; roseo-crispa, 392
 Nerines, seedling, 392
 Newry, notes from, 40
 Newstead, Wimbledon, hardy plants at, 129
 Nicotiana affinis, 384; sylvestris, 51, 89, 237, 321, 363

Notes, some Shropshire, 4
 November in S. Devon, 485
 Nursery, Swiss, notes from a, 285
 Nymphaea flower, a proliferous, 16; Froebeli, 91,
 256; odorata sulphurea, 4; stellata, 51; s. at
Gunnerbury House, 277; s. in the open air, 151,
 193, 254
 Nymphæas tender in the open air, 299

O.

OBITUARY—

Anderson, Jas., 12
 Bergman, F., 172
 Budd, Dr. S. P., 232
 Girdlestone, T. W., 12
 Johnson, Alfred, 212
 Martin, James, 290
 Mason, Major, 72
 Outram, Alfred, 490
 Parker, Mrs. Richard, 112
 Protheroe, W. H., 470
 Rivers, T. F., 172
 Shrimpton, J., 408
 Vilmorin, Henry, 172, 192
 Wallace, Dr. Alexander, 290
 Wood, J., 310
 October in S. Devon, 420; ornamental shrubs of,
 402
 Odontoglossum, a distinct natural hybrid, 361;
 Adrianae, 499; Andersonianum, 499; aspersum,
 499; blandum, 404; Cervantesi punctatissimum,
 480; Cookeanum, 499; Coradinei, 499; corda-
 tum, 213; crispum Bassano, 267; c. Daphne,
 307; c. Franz Musereel, 146; c. purpurascens,
 9; c. Seraphim, 9; c. var. Lily, 46; cristatel-
 lum, 422; Denisoniae, 499; Edwardi, 431;
 elegans, 500; excellens, 500; Galleotianum,
 500; graede Pitteanum, 307; Halli xantho-
 glossum, 94; Harryanum, 201; Harryano-
 crispum, 9, 47; hastilabium, 181; Horsmani,
 500; Humeanum, 500; Londresboroughianum,
 241; loochristyense Ladybird, 425; odoratum,
 404; polyanthum, 22; Rossi, 423; Sander-
 ianum, 500; Schlieperianum, 46; Schlieper-
 ianum citrinum, 422; Uro-Skinneri, 361; vexa-
 tivum, 500; Wallisi, 201; Wilckeanum, 500;
 Williamsianum, 500
 Odontoglossums, autumn-flowering, 180; natural
 hybrid, 499; some recent, 146
 (E)nothera, a double, 71; Fraseri, 107; fruticosa
 Youngi, 32; missouriensis, 111; tetraptera
 rosea, 91; Youngi fl.-pl., 92
 Otlington, notes from, 6
 Olearia Haasti, 206; *Haasti*, 206
 Olive trees, old, in Majorca, 326; at Majorca,
 326
 Omphalodes Luciliae, 188
 Oncidium carthaginense, 22; Cavendishianum,
 499; cheiroporum, 480; crispum, 361; cuculla-
 tum, 21; dasystyle, 179; Forbesi moortbeeki-
 ense, 466; Gardneri, 500; hamatochilum, 500;
 Harrisoniae, 280; incurvum, 46, 361; lamelli-
 gerum, 118; Lanceanum, 46, 332; luridum,
 240; macranthum, 202; maculatum, 181; pec-
 torale, 500; prae-textum, 147; pubes, 280;
 pulvinatum, 118; sarcodes, 466; serratum,
 371; undulatum, 180, 280; varicosum, 404;
 v. Lindeni, 466; Wheatleyanum, 500
 Oncidiums, natural hybrid, 500
 Onion Cranston's Excelsior, 320
 Onions, 476; autumn, 293; feeding, 27; large,
 241, 451; storing, 222; thinning autumn-sown,
 222; winter, plots, 27
 Orchardton, Castle Douglas, N.B., a note from,
 87
 Orchid roots, 21
 Orchids and fine-foliaged plants, 360; back
 breaks in, 431; basket, 499; cool, 118, 423;
 natural hybrid, 478; natural hybrid (Eastern
 section), 201; rare v. beautiful, 53; watering,
 280; wild, 95
 Ornithocephalus grandiflorus, 465
 Origanum Tournforti, 251
 Osmanthus ilicifolius purpurascens, 5
 Ostrowsky magnifica, 111; m. in Kent, 132
 Osmunda regalis, 91
 "Our Gardens," an additional page for, 124

Ourisia coccinea, 32
 Oxalis crenata, 320

P.

Paeony Lemon Queen, 4; the single white, 362;
 the single white, 362
 Peonies, 72; and Roses, 17; herbaceous, 41;
 planting, 41
 Pansy, Tufted, A. J. Rowberry, 19; Archie
 Grant, 71; Blanche, 110; Duchess of Fife and
 its sports, 111; Eodymion, 231; Florizel, 232,
 294; Howard H. Crane, 151; King of the
 Blues, 151; Magie, 71; Miss Gertie Waterer,
 19; Mrs. A. H. Beadles, 110, 286; Ophelia,
 19; Walter B. Child, 71; White Beauty, 231;
 White Duchess, 71
 Pansies, some of the newer Tufted, 41; Tufted,
 238; Tufted, for stock, 110; well-grown, 117
 Paphinia grandis, 423
 Paphinias, 54
 Parlour Palm, a growth of the, in a Japanese
 vase, 97
 Parsnip fly, the, 56
 Parsnips, 496
 Passiflora Constance Elliott in S.W. Scotland, 131
 Pea, a dwarf Ne plus Ultra, 136; Alderman, 51;
 Autocrat, 222; awards at Chiswick, 105;
 Bountiful, 76; Dalby Prolific, 51; Dickson's
 Fertility, 44; Duke of Cornwall, 51; dwarf Ne
 plus Ultra, 195; Glory of Devon, 51; insecti-
 cide, a, 196; Michaelmas, 42; Nobleman, 51;
 Prodigy, 44, 76; Sharpe's Queen, 76, 136;
 sticks, 107; sticks and dwarf Ne plus Ultra,
 158; *Syon House*, 43; Winifred, 51
 Pea, Everlasting, Mr. J. Wood's Scarlet, 92, 110,
 131
 Pea, Sweet, Butterfly, 58; Emily Eckford, 71
 Peas, Sweet, 151; exhibiting, 143; failing, 110;
 for table decoration, 111; in America, 218; in
 hot weather, 58
 Peas, Everlasting, 31
 Peas, 158; and drought, 76, 263, 320; constitu-
 tion in, 158; Earliest Marrow and Chelsea
 Gem, 27; early, 26, 44; failure of, 76; for
 market, 293; late, 43, 196; notes on, 75; on
 early borders, 44; thrips on, 44; vegetable
 refuse for, 337, 375, 451
 Peach Alexander, 73; Amsden June on open
 walls, 167; and Nectarine trees, young and
 old, 395; and Nectarine trees, old, 134; Crim-
 son Gaiety, 133; Dagmar, 35; Desse Tar-
 dive, 357; Hale's Early, 113; Prince of Wales,
 492; Princess of Wales, 306; Salway, 67; Sea
 Eagle, 200, 312; Thomas Rivers, 34; trees,
 current work among, 34; trees, red spider on,
 199; trees, summer pruning of, 175; trees,
 treatment of, after fruiting, 113; trees, unna-
 iling outdoor, 492; trees, yellows in, 352; Vi-
 olette Hative, 313, 352
 Peaches and Nectarines budding, 164, 258; and
 Nectarines in the south and north, 99; and
 Nectarines, stone-splitting in, 102; and Plums,
 late, 370; early, on open walls, 74; in Russia,
 100, 175; in Sussex, 356, 409; on back walls,
 235, 271, 369; outdoor and aphid, 74; red
 spider on, 114; stone-splitting in, 35; the out-
 door, 73; three good early, 236; two good late,
 396
 Pear Alexandre Lambre, 409; Althorp Crassane,
 474; Aston Town, 398, 462, 473; Beurré Bosc,
 357, 462; Beurré d'Anjou, 474; Beurré de
 Jonghe, 493; Beurré Diel decaying, 471; Beurré
 Giffard, 174; Beurré Hardy, 493; Beurré
 Superfin, 473; Beurré Superfin, variation in
 colour of, 410; Bonne de Malines, 427; Clapp's
 Favourite, 259, 312, 357; Double de Guerre,
 426; Doyenné d'Alençon, 260; Doyenné du
 Comice, 492; Doyenné d'Ete, 168; Durondeau,
 474; Emile d'Heyst, 386, 409, 472; Fertility,
 33, 74; Flemish Beauty, 397, 473; Forelle, or
 Trout, 474; Glou Morceau, 492; Hacon's In-
 comparable, 462; Maréchal de la Cour, 474;
 Marguerite Marillat, 308; Marie Louise, 312,
 474, 493; Passe Colmar, 474; Jargonelle in
 Herefordshire, 344; Jargonelle in bloom, 344;
 Seckle, 409; the Pitmaston, 257, 351; the Pit-
 maston at Freefields Gardens, Insch, 257;

Olivier des Serres, 474; tree destroyer, a, 35;
 Triomphe de Vienne, 263, 313, 354; Van Mons
 Leon Leclerc, 352; Winter Nelis, 493
 Pears adopted by the Congrès Pomologique of
 France, 66, 101, 114, 134, 163, 174, 234, 303;
 birds and wasps attacking, 492; capricious,
 463; late, 461; stowing, 473
 Peat-moss litter, 261, 325, 365
 Pelargonium Beauty, 257; Cassiope, 50; Coun-
 tess of Derby, 50; Fire Dragon, 9; Ian Mac-
 laren, 447; Ivy-leaved, Mme. Crousse, 141;
 Lady Newton, 469; Lilian, 425; Mr. W.
 Bealby, 20
 Pelargoniums, Ivy-leaved, for cutting, 139; pro-
 pagating, 140; regal, shading, 20; tricolor,
 131, 194, 238; zonal, 459
 Penjerick, 413; in the garden at, 415
 Pentstemons, 59, 315; at Kirkconnel, N.B.,
 232; seedling, 86
 Perfumes from plants, 59
 Periploca graeca, 68
 Peristeria elata, 240
 Pescatorea cerina, 178
 Petunias, 194
 Phaius grandifolius, 465
 Phalaenopsis Esmeralda, 423; Stuartiana, 500
 Philadelphia grandiflorus, 37; microphyllus, 32,
 51
 Philodendron in fruit, 496
 Phlox Berenice, 273; coccinea, 294; Fiancée,
 89; Le Mahdi, 149, 270
 Phloxes, herbaceous, 151
 Phygellus capensis, 269
 Phyllostachys aurea, 436; bambusoides, 436;
 Boryana, 437; Castillonis, 437; fastuosa, 436;
 flexuosa, 437; fulva, 437; Henonis, 437; hetero-
 cyclo, 436; Marliacea, 436; mitis, 437; nigra,
 437; nigra at Gunnersbury House, 433; nigro-
 punctata, 437; nigra at Penjerick, 422; rusci-
 folia, 438; sulphurea, 437; Quiloi, 437;
 violascens, 437; viridi-glaucescens, 437; v.-g. at
 Ken, 438
 Physalis Franchetti, 273, 328; F. and P. Alke-
 kengi, 237
 Pilumna fragrans, 430
 Pine, the Corsican, 95; the Mountain, 189
 Pinguicula caudata, 447, 459
 Pinks, alpine, 214; propagating, 17
 Pinus Laricio, 95; montana, 189
 Plants, bulbous, thin carpets over, 470; by
 selection, improving, 319; choice room, 324,
 391; fine-foliaged, in the flower garden, 194;
 hardy, notes on, 17, 38, 85, 109, 139; Japanese,
 grouping, 232; ordinary bedding, and the
 drought, 171; potting, in winter, 431; showy
 rockwork and edging, 16; small, for decora-
 tion, 445; terraces, 373; winter-flowering, 265
 Platycodon Mariessii, 151
 Pleioon precox, 332
 Pleurothallis Roezli, 240
 Plumbago capensis, 264, 509; Larpentae, 294
 Plum and Pear trees, neglected, 474; Belle de
 Louvain, 35; Coe's Golden Drop, 473; Den-
 niston's Superb, 174, 260; Dymond, 168;
 Early Violet, 176; Kirke's Black, 272; Per-
 shore, 198, 211, 462; Pond's Seedling, 312;
 Reine Claude de Bavay, 352; The Czar, 166;
 the Early Violet, 257; the Keutish Bush, 354;
 the Myrobalan, 133; the Sand, 410; Webster's
 Gage, 344; Winesour, 357
 Plums, scarcity of, 258
 Poinsettias, 498
 Polygonum baldschuanicum, 42, 190, 191, 251;
 b., propagating, 17
 Pomegranate, the, in a tub at Gunnersbury, 375
 Poppy, a garden hybrid, 320; Mr. Moon's hy-
 brid, 363, 390; white Bush, 239
 Poppies, the oriental, 32
 Portlandia grandiflora, 264, 490; grandiflora,
 264
 Potato British Queen, 320; Caradoc Seedling,
 90; Carter's First Crop, 136; Carter's Snow-
 ball, 452, 496; crop, the, 451; crop, the early,
 104; Devonian, 242; early, culture, 477; Early
 Peter, 90; Ellington, 268; Famous, 43; Hib-
 berd's Seedling, 90; Ninety-fold, 76, 136;
 Norbury Park, 90; Prolific, 90; Renown, 196,
 242; Sutton's Seedling, 158; Syon House Pro-

lific, 242; The Sirdar, 268; Veitch's Main-crop, 242
 Potatoes, 25; bad growth on, 26; coal ashes for, 320, 357; field, 319; forced, 27; in the south, 263; lifting, 293; notes on early, 8; quality in, 374; soil for, 262
 Potentilla formosa, 149; opaca, 4
 Pot-pourri or Rose jar, 70
 Pots, ornamental, 440
 Pratia angulata, 91, 107
 Primroses, double, 456; the blue, 428
 Primula capitata, 348; floribunda, 387; f. Isabel-lina, 232; obconica fimbriata, 366; sikkimensis at Edinburgh, 4
 Provinces, topiary work in the, 118
 Prunella grandiflora alba, 91; g. Webbiana, 362; Webbiana, 91
 Prunus Cerasus fl.-pl., a spray of, 8; pseudo-Cerasus (single var.), 300; p.-C. fl.-pl., 5; p.-C. fl.-pl., 5
 Pteris nemoralis variegata, 54; scaberula, 54; tricolor, 54, 106; Victoria, 54
 Pterises, choice, 54
PUBLIC GARDENS—
 Battersea Park, Chrysanthemums in, 408
 Brighton, a new park for, 490
 Brockwell Park, proposed extension of, 12, 348, 448
 Coldfall Wood, closing of, 368
 Dalston, public garden for, 52
 Dollis Hill estate, 12
 Finchley, recreation ground for, 92
 Hammersmith, open space for, 152
 Hampstead Green, 112, 252
 Ilford, opening of new park at, 252
 Metropolitan Public Gardens Association, 330
 Open spaces, 52, 72, 490
 Park de la Tete d'Or, Lyons, 428
 Paragon open space, the, 12
 Rochester pleasure ground, 490
 Southwark Park, Chrysanthemums at, 367
 Tudor House, Bromley, 490
 Victoria Park, Chrysanthemums at, 367
 Waterlow Park, Chrysanthemums in, 448
 Worsley, recreation ground at, 428
 Pulmonaria saccharata picta, 392
 Punica Granatum, 251
 Pyrethrum uliginosum, 367, 390, 456, 501
 Pyrethrums, planting, 15; top dressing, 18
 Pyrus coronaria fl.-pl., 32

Q.

Quercus coccinea, 366
 Quick hedge, a, 368
 Quince, the, 473

R.

Ragged Robin, the double, in pots, 20
 Rainfall, a heavy, 387
 Ramonda pyrenaica, 228; pyrenaica, 228
 Ranunculus Lyallii, 153, 240, 269; at home, 273
 Raspberry Baumforth's Seedling, 164; Blackberry hybrid, 151; Golden Queen, 51
 Raspberries, autumn fruiting, 395; cutting back, 236, 271, 396, 472; dessert, 175; for dessert, packing, 114; late, in East Anglia, 354; profitable, 98; summer pruning of, in dry weather, 176
 Renanthera Imschootiana, 89; Storlei, 94
 Retinospora obtusa aurea Crippsi, 229, 232
 Restrepia Lansbergii, 372
 Rhododendron Falconeri, 140; Little Beauty, 242; multicolor Curtisii, 62; m. Mrs. Heale, 63; myrtifolium, 159; myrtifolium, 159; Princess Royal, 509; retusum, 325
 Rhododendrons flowering in the open, 489; in flower, 432; Malayan, and their hybrids, 62
 Rhus Cotinus, 206; Toxicodendron radicans, 329
 Richardias, two new, 121
 Rivina humilis, 418
 Robin Hood House, Great Berkhamsted, 453
 Robinia inermis albo-variegata, 189; neo-mexicana, 38
 Rodgersia podophylla, 108, 132; podophylla, 108
 Rodriguezia planifolia, 423
 Romneya Coulteri, 110, 239; Coulteri, 239; C. in N. Wales, 251; C. in Scotland, 269

Rondeletia speciosa, 391
 Root pruning, 464; good effects of, 369, 411
 Roots through the winter, preserving, 476
 Rosa Andersoni, 96; anemoniflora, 136; Brunonii, 317; Brunonii, 317; corallina, 229; hispida, 398; lutescens, 398; moschata, 317; moschata, 317; Pissardi, 317; sericea, 317; Wichuriana, 136
 Rose, a fine old, 364; a fine pillar, 15; a pretty Polyantha, 254; Alfred Colomb, 318; Augustine Guinoisseau, 318; Bennett's Pernetual, 15; Beryl, 15; Caroline Testout, 135; Celine Forestier, 95, 135; Cheshunt Hybrid, 15; climbing Kaiserin Augusta Victoria, 209; Comtesse Festetics Hamilton, 454; Coquette Bordelaise, 55; Crested Provence, 2; Daisy, 318; Daniel Lacombe, 2; Dr. Rouges, 2; Duchesse d'Auerstadt, 136; Duchess of Albany, 254; Duke of York, 55; Earl of Pembroke, 254; Empress, 370; Felicite' Parmentier, 2; Fellenberg, 52; Francois Michelon, 96; General Jacqueminot planted out under glass, 318; Germaine Trochon, 253; Gloire des Rosomanes, 318; Gruss au Toplitz, 149, 171; Gustave Regis, 31; Hon. Edith Gifford, 370; J. B. M. Camm, 89; Killarney, 15, 96; Kronprinzessin Victoria, 2; La France on a wall, 370; Laurette Messimy, 447; Maman Cochet, 253; Mme. Abel Chatenay, 15; Mme. Alfred de Rougemont, 96; Mme. C. P. Strassheim, 254; Mme. Cadeau Ramey, 50; Mme. de Watteville, 168; Mme. Eugene Resal, 219; Mme. Lambert, 318; Mme. Laurette Messimy, 54; Mme. Rene Gerard, 15; Mme. Wagram, 15; Mme. Willermoz, 2; Marchioness of Londonderry, 96; Marie d'Orleans, 168; Mrs. F. W. Landford, 95; Mrs. Frank Cant, 15; Mrs. R. G. Sharman-Crawford, 254; Mrs. W. J. Grant, 15; Myrianthes renoucle, 15; over parish room at Glenowen, Delgany, 364; Pink Rover, 2; Princess Theodore Galitzine, 370; Reine Blanche, 2; Robert Duncan, 136; Rosette de la Legion d'Honneur as a standard, 95; Safrano, 364; Sir Rowland Hill, 136; Souvenir de la Malmaison, 220, 366; Souvenir de Mme. Joseph Metral, 168; Souvenir de Therese Lvet, 169; Tennyson, 136; the Indian, at Delgany, 416; Ulrich Brunner pegged down, 208; Violoniste Emile Leveque, 209; white Maman Cochet, 50, 51; Wm. Allen Richardson in bush form, 254; Xavier Olibo, 209
 Roses at the Temple show, 14; at Woking, 55; Ayrshire and evergreen, for massing, 55; climbing, 192, 446; c. and pillar, thinning out, 318; divested of their buds, exhibiting, 82; exquisite tints of some recent novelties in, 96; for the shrubbery, 454; growing too freely, 364; in August, 135; in July, 169; in New Zealand, 168; in September, 253; in December, 489; malformed, 254; Monthly, 253; Moss, common and gracilis, 14; most popular, at the Crystal Palace show, 209; new or little-known, at the Crystal Palace, 14; on pillars and arches, 55, 96, 169; on own roots, 318; pegging down, 208; pillar, 169, 209; planting, 318; pruning in autumn, 370; red, for Christmas, 136; some good China, 219; some good Polyantha, 370; some interesting, at Kew, 1; Tea, some beautiful, 81; the dearth of dark, 82; town, 454; two brilliant bedding, 14; two fine button-hole, 82; two miniature Moss, 15; under glass, 169
 Ross-shire, N.B., a view in, 117
 Rowan tree, the, 69
 Rubus deliciosus in fruit, 51; phoenicolasius, 206
 Rudbeckia Golden Glow, 148, 172; Golden Glow, 148; laciniata fl.-pl., 148
 Ruellia macrantha, 418
 Russia, Peaches in, 175
 Rust on Carnations, 324

S.

Saccolabium ampullaceum, 21; gigantoum, 280; Hendersonianum, 21
 Saccolabiums, 147
 Sad Aziola, 365

Sagittaria variabilis, 108
 Saintpaulia ionantha, 447
 Salads, scarcity of, 195; winter and spring, 195
 Salvia carduacea, 52; Pitcheri, 387; splendens and its varieties, 382; s. grandiflora, 252, 460, 509; Tenoreana, 58
 Saxifraga apiculata, 469; cochlearis, 4; Cymbalaria, 366, 469; Fortunei, 383; Hirculus major, 51; mutata, 32, 111; peltata, 348; the double Meadow, 86
 Scabiosa caucasica alba, 110
 Scale, stock-seed, on Orchids, 480
 Schomburgkia Lyonsi, 149; tibicinis, 179
 Schools, industrial, teaching horticulture in, 92
 Scotland, fruit-farming in, 244
 Schubertia grandiflora, 265, 307
 Scilly Isles, flower growing in the, 441
 Sea Lavenders, 316
 Seaweed for fruit borders, 311
 Sedum amplexicaule, 402; brevifolium, 489; b. var. Pottsi, 510
 Selaginellas for market, 449
 Sempervivum Hookeri, 152
 Sempervivums at Rockville, Edinburgh, 42
 Senecio macroglossus, 509; pulcher, 269
 September in S. Devon, 336
 Shallots, lifting, 27
 Shipley Hall, notes from, 212
 Shrubs, flowering, in S. Devon, 342, 484
 Sidalcea Listeri, 131
 Silene alpestris, 31
 Smilax, hardy species of, 505; aspera, 505; a. Buchananiana, 505; a. maculata, 505; a. mauritanica, 505; Bona-nox, 505; Cantab, 505; Cantab in the Cambridge Botanic Gardens, 506; China, 505; excelsa, 506; glauca, 506; herbacea, 506; hispida, 506; laurifolia, 506; pseudo-China, 506; rotundifolia, 506; tamnoides, 506; Walteri, 506
SOCIETIES—
 French Chrysanthemum, 386
 National Auricula, 509
 National Carnation and Picotee, 109, 509
 National Chrysanthemum, 191, 269, 309, 348, 368, 405, 448, 467, 509
 National Dahlia, 210, 249, 290, 490
 National Rose, 29
 National Viola, 31
 "One and All" Flower Show, 170
 Royal Gardeners' Orphan Fund, 31, 70, 368
 Royal Horticultural, 9, 31, 49, 89, 149, 151, 171, 189, 211, 229, 251, 267, 287, 307, 330, 346, 368, 385, 425, 448, 466, 490, 507
 United Horticultural and Benefit Provident, 310
 Sobralia Lindeni, 423
 Sobralias, 431
 Soils, heavy, deep stirring of, 411
 Solanum, Jasmine flowered, 395; Melongena, 328
 Solomon's Seal for forcing, 483
 Solution, caustic alkali, 493
 Sopbro-Cattleya Chamberlainiana, 466; Queen Empress, 89
 Sophronitis grandiflora, 431; violacea, 371
 Spade, the garden, 117
 Sparrow, the, how to deal with him, 69
 Spartium junceum, 120
 Spigelia marilandica, 132
 Spinach, 26; autumn and winter, 105
 Spirea Anthony Waterer, 266; Aruncus, 4; bracteata, 38
 Stachys tuberifera, 496
 Stanhopea graveolens, 179; oculata, 179; oculata, 179; tigrina, 94
 Statice Bondwelli, 273; Butcheri, 392; latifolia, 131; minuta, 273; penduliflora, 270; profusa, 265
 Stenoglottis longifolia, 329
 Sternbergia lutea, 330, 364, 387, 392, 428, 447, 456
 Stock, effects of the, on graft, 68
 Stocks, blight-proof, 133
 Stocks, East Lothian, 42
 Stokesia cyanea, 447, 480
 Stove and greenhouse plants, arrangement of, 460
 Strawberry beds, 409; crop, the, 31; Duke of Edinburgh, 492; Elton Pine, 352; Empress of

India, 3, 99; Fillbasket, 312; Lady Suffield, 3, 90; Latest of All, 313, 345, 397; Leader in frames, 272; Lord Kitchener, 51; M. MacMahon, 115, 167; plants, potting young, 98; plants, young, 303; President, 3, 28, 66; Royal Sovereign, 28; St. Joseph, 260, 313; season, tho, 97, 166; Stevens' Wonder, 272; V. H. de Thury, 98; Waterloo, 98, 113
 Strawberries, 394; and bush fruit, mulching, 3; and insects, 66; and the drought, 33; at Gunnersbury, 344; at Norwich show, 75; at Syon, 370; boxing, 272; Dr. Hogg and British Queen, 167; failure of, 115, 226; flavour in, 68, 99, 173, 260; in the open ground, 65, 98; late, 198, 258, 302; late, for profit, 351; late, on north borders, 259, 396; new and old, 471; notes on, 225; President and Keens' Seedling, 98, 134, 174; scarcity of, 34; the early, 3, 73
 Streptosolen Jamesoni, 139
 Sultan, the Sweet, 16; Sweet, the yellow, 109
 Sultans, Sweet, for market, 299
 Sun Rose, the Carton, 212
 Sunflowers, 191
 Sweet William, Murray's double dark, 86
 Symphyandra Hofmanni, 413
 Synthyris reniformis, 91
 Syringa Emodi, 38
 Syon Gardens, notes from, 378

T

Tabernæmontanas and Euphorbias planted out, 218
 Table decoration, a simple, 117
 Tacsonia Van Volxemi fruiting, 294, 366, 383
 Tamarisk, the, at Kew, 464
 Tamarisks, 404
 Tamarix chinensis, 464; gallica, 464; hispida, 465; tetrandra, 465
 Tanacetum argenteum, 469
 Tecoma radicans, 266
 Temple, border flowers at the, 40; rock and dwarf plants at the, 38; show, bulbous plants at the, 38
 Terrace garden with trees in true form, Sandside, Thurso, N.B., 301
 Theit, a mean, 348
 Things, some, better omitted, 242, 320
 Thorn Apple, the, 362; the, growing wild in Greenwich Park, 362
 Thrips on flowers, 191
 Thunbergia fragrans, 383
 Thunderstorm, effects of, 4
 Thunias, repotting, 431; resting, 314
 Tibouchina macrantha, 387, 432
 Toad, the, 318
 Tobacco, the night-scented, 384; the night-scented, 384
 Torch Lilies, 458
 Tomato Albert Victor, 242; Eclipse, 293; Ham Green, 476; houses, early, constructing and heating, 25; Laxton's Open-air, 158; Royal Chester, 496; Stirling Castle, 452, 496; the Chiswick Peach, 151; Up-to-date, 357; vegetable or fruit? 9, 496
 Tomatoes, corrugated v. smooth, 476; early, 222; feeding, 26; finishing off late, 374; for market, 136; forwarding open-air, 193; French, 411;

not setting, 45; notes on, 338, 358, 375, 412, 451; spiral trained, 76; winter, 76
 Torenia Fournieri, 20
 Trade commissions, 448
 Trees and shrubs, artistic planting of, 484; flowering in August, 214; forest, wiltful disfigurement of, 295; fruit, planting in heavy soils, 492; in bloom in July, 138; in forests, preservation of, remarkable, 365; Peach and Nectarine, old, 473
 Trichocentrum albo-purpureum, 280
 Trichopilia lepida, 93; tortilis, 22
 Trichosma suavis, 332
 Trillium declinatum, 71
 Tritoma citrina, 85; grandiflora, 149; Uvaria, 191
 Tritonia imperialis in S.W. Scotland, 232; rosea, 192
 Tropæolum Leichtlini, 31; speciosum, 107, 191, 255, 273; s. in Oxfordshire, 294; tuberosum, 294, 389, 428, 486, 502
 Tulipa Lownei, 155; Sprengeri, 438, 469
 Tulips, May-flowering, 316; notes on, 102
 Turnip beetle, the, 159
 Turnip Green Ring, 411
 Turnips, 26, 159; long-rooted, 293; shortness of winter, 478; winter, 195
 Tydeas, 20

V.

Vallota purpurea, 215, 325
 Vanda cerulea, 361; Sanderiana, 95; suavis and V. tricolor, 214; teres (Gunnersbury Park var.), 89
 Vandas at Weybridge, 431
 Verbascum Hookeri and V. Lychnitidis, 52; Lych-nitidis, 71
 Vegetable Marrows, 264, 320
 Vegetable refuse for Peas, 337
 Vegetables and drought, 55, 104; new, 357
 Veratrum nigrum, 132, 152, 171
 Verbena Ellen Willmott, 211; the sweet-scented, in a tub at Gunnersbury House, 379
 Verbenas, 456; seedling, 418
 Veronica La Seduisante, 459; paniculata, 52; salicifolia, 72; sibirica, 52
 Viburnum acerifolium, 77; Awafuki, 78; bure-jeticum, 78; cassinoides, 77; coriaceum, 79; cotinifolium, 78; dentatum, 78; dilatatum, 78; erosum, 78; forcing our native, 325; furcatum, 78; Keteleeri, 78; Lantana, 78; Lentago, 78; macrocephalum, 78; marrocephalum, 82; molle, 78; nudum, 78; odoratissimum, 78; Opulus, 78; O. fructa-luteo, 78; O. var. nanum, 78; O. var. sterile, 83; plicatum, 402; plicatum in New Jersey, 4; prunifolium, 78; pubescens, 78; reticulatum, 78; Sieboldi, 78; stellulatum, 78; Tinus, 78; Tinus, 83; T. hirtum, 79; T. lucidum, 79; T. purpureum, 79; tomentosum plicatum, 79; t. p. at Kew, 77; t. p., spray of, from a New Jersey garden, 79
 Viburnums, 77
 Victoria regia flowering in the open, 367
 Vine borders, air for, 33, 102; loose, 259; loose v. solid, 175; watering, 102
 Vineries in hot weather, airing, 115

Vines, firm soil for, 260; grafting and inarching, 233; manure for, 2; oidium in, an effective cure for, 312; outside v. inside borders for, 492; pruning, 355; raising young, 258; red spider on, 52; ripening young pot, 176
 Viola Archibald Grant, 50; Jackaopas, 50; J. B. Riding, 50; Peacaitland, 50
 Violet California, 238, 260; Explorateur Dybowski, 261; Italia, 260; James Watt, 455; La France, 260, 392, 489; l'Inepuisable, 261; Luxonne, 261; Mrs. J. J. Astor, 386, 391; Primavera, 260; Princess Beatrice, 260; Princess of Wales, 260, 427
 Violets, double, protecting, 362; exhibiting, 455; strong growing, 456, 502; the new giant, 260; winter, 457
 Vitis Caignetiae, 348; inconstans, 326; i. in fruit, 484; Thunbergi, 89

W.

Walks, drives and weed-killers, 106
 Wall breaks, 65; edgings, 6
 Wallflower, Mr. H. Crewe's double, 510
 Walls, stone v. brick, 463; the value of north, 351
 Warrea tricolor, 201
 Warscewiczella Wendlandi, 180
 Wasps, 323; and fruit, 344
 Water Lily, red Swedish, a variety of Nymphaea alba? 130
 Water Lilies, 18, 58; in America, 12; insects on, 52; M. L. Marliac's, in Ireland, 298; tropical, in the open air, 329, 486
 Weather, the, in W. Herts, 6, 12, 31, 52, 72, 92, 112, 132, 152, 172, 192, 212, 231, 252, 270, 290, 328, 365, 388, 408, 428, 448, 470, 490, 510; in Wilts, 510
 Where to plant, 207
 Wineberry, the Japanese, 134
 Winter, prospects for, 325
 Wisley, Water Lilies at, 108
 Wistaria, fruiting of the, 328; white, at The Larches, East Grinstead, 266
 Wistarias, the, 266
 Witsenia corymbosa, 264
 Women, teaching gardening to, 408
 Woodwardia radicans in Cornwall, 402

X.

XL All vaporising compound and the Pharmaceutical Society, 470, 490

Y.

Yew, clipped arches of, 304; hedges, old, at Holme Lacy, 297; tree poisoning, 402, 465
 Yorkshire, notes from, 32
 Yucca filamentosa, 211; gloriosa, 109

Z.

Zauschneria californica, 111; c. splendens, 231
 Zephyranthes Atamasco, 251; white-flowered, 323
 Zygo-Colax Amesiana, 508
 Zygopetalum Mackayi, 181, 465; maxillare, 54

COLOURED PLATES.

Anemone blanda Cypriana	280	Epiphyllum Makoyanum	202	Prunus Cerasus pendula	300
Cattleya Dominiana langleyensis	142	Fritillaria imperialis longipetala	358	Prunus persica magnifica	516
Chimonanthus fragrans grandiflorus	122	Incarvillea grandiflora	22	Rhododendron Exquisite	62
Clivia miniata citrina	338	Iris albo-purpurea	500	Rhododendron malayanum Little Beauty	242
Coleus thyrsoideus	82	Kniphofia Tucki	458	Rosa hispida	398
Cymbidium Traceyanum grandiflorum	42	Lobelia fulgens, varieties of	182	Tulipa saxatilis	102
Daffodils, three—1, Monarch; 2, Weardale Perfection; 3, Lulworth	162	Manettia bicolor	6	Tulipa Sprengeri	438
Daffodils, two—1, Mme. de Graaff; 2, Apricot	222	Meconopsis heterophylla	480	Verbena Ellen Willmott	418
		Nerine Manselli	378	Violets, single—1, Princesse de Galles; 2, Italia; 3, Amiral Avellan	260
		Papaver, hybrid	320		

M. HENRY DE VILMORIN.

M. HENRY DE VILMORIN was one of a family for several generations devoted to horticulture, and to whom we are much indebted for their publications as well as excellent cultures in their always interesting gardens at Verrieres and elsewhere. His father having died young, he took his place at the head of the firm at a very early age, and well he acquitted himself of that task; and not only of the affairs of his own house, but became a trusted authority on rural economy throughout Europe and America as well as in France. Charles Henry Philippe Lévêque de Vilmorin, the eldest of the four children of M. Louis Lévêque de Vilmorin, was born at Paris on February 26, 1843. The great-grandfather of Henry de Vilmorin, Philippe Victor de Vilmorin, who died in 1804, was a distinguished agriculturist, a correspondent of the Institut, and in 1791 was one of the first members of the association known at the present day as the Société Nationale d'Agriculture de France. He was succeeded by his son Pierre Philippe André, to whose reputation as an authority on fodder and garden plants was added that of a distinguished forester. He established at Barres (Loiret) an arboretum, since become a State property, where he pursued with ardour the study of forest trees. He succeeded his father as correspondent of the Institut, was elected a member of the society above named in 1804, and died in 1862 at the age of eighty-six. Candolle, the botanist, named a plant from St. Domingo, Vilmorinia, after him. The father of Henry M. Louis de Vilmorin, who died in 1860 at the age of forty-four, was also an observer of the first order. In 1842 he commenced to make researches in connection with Wheat, and from 1845 to 1857 he made some remarkable discoveries in connection with the Potato disease. He also effected improvements in Carrots and Beetroots, and was an acknowledged authority on most problems concerning cultivation on a large scale. Like his father and grandfather, he was a member of the Société Nationale d'Agriculture. He was assisted in his labours by his wife, Mme. Elisa de Vilmorin, a woman of rare intelligence, and who was employed by M. Decaisne to write a monograph on Strawberries for his great work, "Le Jardin Fruitier du Muséum."

In 1878, a commission, presided over by M. Bouley, of the Institut, was directed by the Prefecture of the Seine to study methods of cultivation with sewage, and Henry de Vilmorin was appointed reporter. His communications to the Société Botanique de France in 1879 and 1880 on the cross-breeding of Wheats of different species, and his studies on the sowing, selection and cultivation of Wheats led to the publication of a fine volume entitled "Les Meilleurs Blés." The bulletins of the Société Nationale d'Agriculture between 1885 and 1896 are filled with his communications on these subjects. His latest observations were, in fact, an argument in favour of unity of species in the various cultivated grains. In 1866 he published a second edition of the "Catalogue Methodique et Synonomique des Principales Variétés de Pommes de Terre" commenced by his father, to which he added on his own account more than 200 varieties, classifying them into twelve divisions and thirty sections, which included all known forms. The collection has been maintained at Verrieres since 1815. His researches in Beetroot continued uninterruptedly from 1875 to 1889, and it is well known that his labours contributed largely towards developing the saccharine properties of this precious plant.

In 1893 M. Henry de Vilmorin visited the United States as delegate of the Société des Agriculteurs de France in order to study the methods of cultivation there which he had heard much extolled, and which he made the subject of a lecture under the title of "L'Agriculture et l'Horticulture aux Etats-Unis." In concert with his brother Maurice de Vilmorin, he thoroughly revised the illustrated work known as "Les Fleurs de Pleine Terre." His tastes as a hybridiser led him to institute experiments at Verrieres on the Salpiglossis, Poppies, Carnations, etc., his aim being perfection of form and colour. His investigations were not, however, confined to the region around Paris. The south of France had always its attractions for him. He spent with his family several winters at Antibes, where he was on friendly terms with M. Charles Naudin, director of the Villa Thuret. The delightful climate of Golfe-Juan decided him to form the Jardin de Satil, which contains amongst other rare things a Eucalyptus brought from Australia by M. Ed. André, and called after him E. Vilmoriniana.

The Société Nationale et Centrale d'Horticulture was not long before it attracted him to itself, and he became successively its secretary, vice-president and first vice-president. In the various posts which he filled in the committee and on the council he won the affection and esteem of his colleagues. His perfect urbanity might seem obscured by a certain coldness at first, but to those to whom he took a liking to he was full of cordiality, upright, obliging and generous, and he made a noble use of a fortune honourably acquired by the labours of his ancestors and himself.

He made numerous voyages to the different countries of Europe, to North America, to Algeria, Tunis and Egypt, and in the last-named country he commenced some experiments in cultivation. At Mont Dore, in the Pyrenees, which he sometimes visited for his health, he delighted to botanise, and his knowledge of the alpine flora of Auvergne was profound. In l'Herault he made a particular study of Pinus Salzmanii, upon which he was able to speak as an authority. Eminent though he was and one to whom distinctions came quite naturally, he was simple in his private life, and whilst indulgent for others, exacting as regards himself.

The GARDEN.

No. 1441.—VOL. LVI.]

[JULY 1, 1899.

INDEX.

(Illustrations in Italics.)

Roses:—		Strawberries and bush fruits, mulching	3	Nymphaea odorata sulphurea.	4	<i>Prunus pseudo-Cerasus fl.-pl.</i>	5	Societies:—	
Rose Crested Provence	2	Strawberries, the early	3	Pæonia Lemon Queen	4	<i>at Palmer's Green</i>	5	Gardeners' Royal Benevo-	
Rose Daniel Lacombe	2	Vines, manure for	2	Potentilla opaca	4	<i>Prunus pseudo-Cerasus fl.-pl.</i>	5	lent	11
Rose Dr Rouges	2			Primula sikkimensis at E lia-	4	flowering shoot of	8	Royal Horticultural	9
Rose Félicité Parmentier	2			burgh	4	Weigela Eva Rathke	6		
Rose Krouprinzessin Victoria ..	2	Notes of the Week:—		Saxifraga cochlearis	4			Obituary:—	
Rose Mme. Willermoz	2	Brodiaea cæcloea	4	Spiræa Aruncus	4			Anderson, James	12
Rose, Moss, Reine Blanche	2	Buddleia Colvillei in Surrey..	4	Thunderstorm on Wednesday	4	Garden Flora:—		Girdlestone, Mr. T. W.	12
Rose Pink Rover	2	Dianthus Fettes Mount	4	evening, effects of	4	Manettias, the	6		
Roses, some interesting, at Kew	1	Eriogonum sub-umbellatum..	4	Viburnum plicatum in New	4			Public Gardens:—	
		Fabiana imbricata	4	Jersey	4	Week's Work:—		Brockwell Park, proposed ex-	
		Geranium Phœum	4			Fruits under glass, work		tension of	12
Orchard and Fruit:—		Hesperis matronalis lilacina	4	Trees and Shrubs:—		among	7	Dollis Hill Estate	12
Apples, late-kept	3	pleua	4	Azaleas	6	Kitchen garden, work in the	7	Paragon open space	12
Currants, Black, pruning	3	Iris gigantea	4	Halesia diptera	5			Miscellaneous:—	
Fruit trees, young wood on old	3	Lilium Thunbergianum	4	Hydrangea petiolaris	5	Kitchen:—		America, Water Lilies in ..	12
Strawberry Empress of India ..	3	Orange Queen	4	Osmagton, notes from	6	Beetroot, a good keeping	8	Greenway, South Devon ..	6
Strawberry Lady Suffield	3	Lupinus, herbaceous, at E lia-	4	Osmanthus ilicifolius pur-	5	Carrot, Short Horn.. .. .	8	Viola snow, National	12
Strawberry President	3	burgh	4	purascens	5	Leeks in June	8	Wall edgings	6
		Notes, some Shropshire	4	<i>Prunus pseudo-Cerasus fl.-pl.</i>	5	Potatoes, notes on early	8	Weather, the, in W. Herts ..	12
						Tomato—Vegetable or fruit? ..	9		

ROSE GARDEN.

SOME INTERESTING ROSES AT KEW.

A VISIT to Kew is at all times pleasing, but to the Rose lover no period of the year can be compared to June. It is not that he will find the latest exhibition novelties, although the leading kinds are well represented, but the charming garden Roses that are here found make a visit very interesting. It will be worth a long journey to see the splendid mass of Crimson Rambler in the dell by the pagoda when the plants are in full bloom, which will probably be early in July. Anyone who has failed with this Rose (and they are not a few) will see here the ideal method of growing it. Judging from the enormous growths made last year, and which are now bearing such a profusion of buds, the soil must be of the best possible description. It would appear that many loads of good loam were carted into the dell to form what I should call a rookery. Standing upon the grass walk, one can see up above upon this bank innumerable arch-like shoots of Crimson Rambler waving and borne down with the weight of the large corymbs of buds. On some of the growths I counted as many as forty sprays of buds, each spray having on an average twenty-seven buds, thus making a total of over a thousand upon one growth. This is nothing very remarkable in itself, but the accumulation of growths so elegantly dispersed and elevated as they are upon this bank in the manner described, with Foxgloves darting out here and there, was to me a veritable treat, and no one able to do so should miss an opportunity of seeing this mass in bloom. In close conjunction is to be seen another bank covered after the same manner with the sempervirens Rose Flora and Blairi No. 2. The same treatment is afforded the plants as in the case of Crimson Rambler. It will be observed that the marvellous growths that are flowering are mostly one year old. Other strong young shoots were breaking up from the

base of the plants (accelerated by the natural style which the one-year-old growths were allowed to assume) that will doubtless ripen sufficiently so that they can be used next year to replace the majority of those now flowering. Of all the free-growing reliable climbers, Flora is one of the best. Having the appearance in colour of a miniature Captain Christy, its growths flower so profusely as to produce veritable wreaths of Roses. I saw it here used to fine effect upon tall pillars and chains. These pillars consisted of stout iron rods about 5 inches in circumference, each rod having three smaller ones to support it. The rods were about 8 feet high and placed about 18 feet apart, chains being festooned between. The variety Flora upon two of these pillars was a marvel of floral beauty. Having reached to the top of the pillar, the growths had been trained upon the chains and were flowering in the greatest profusion. I measured 12 feet of growth on one of these chains. The only fault I could find in the arrangement was that several pillars were badly furnished. To do this work well, only such kinds should be used as will grow well and flower simultaneously. Flora and Ruga go well together, and Félicité-Perpétue and Crimson Rambler would be good companions, and doubtless the newer Polyantha climbers, Aglaia, Euphrosyne, and Thalia, will be useful. Along this same walk alternate pillars of Ivies and Roses were a good feature. One pillar of the golden English Ivy would be difficult to surpass for colour and effectiveness. Here again one could see instances of the unsuitability of certain Roses for pillars, Gustave Regis being one. There were some very happy blendings of Roses and Tufted Pansies noticed by the Palm house, such as Mme. E. Resal and Viola Bullion, Viscountess Folkestone and V. Montgomeryana, Clement Nabonnand, a Rose not often seen, but a good grower, and V. Councillor Waters, Augustine Guinoisseau and V. J. Shires, and a grand bed of Hon. Edith Gifford carpeted with V. Montgomeryana.

A few notes appeared in these columns on June 25 of last year relative to some good early-flowering Roses, and it will not be necessary to reiterate or name the varieties mentioned therein. But I saw a few specially interesting kinds that must become of great value to our gardens when they are disseminated. The most remarkable of these was a cross between R. Wichuraiana and R. rugosa from the Arnold arboretum. The plant had the recumbent habit of Wichuraiana, and the foliage was shiny, but it was also thick and leathery with spiny growths like R. rugosa. The colour of the flowers was a soft satin rose, most pleasing in its freshness, and they were about as large as a Penzance Brier. This hybrid must become of great value by reason of its undoubted hardiness and creeping habit. To show the wondrous divergence of hybrids, a cross between R. Wichuraiana and General Jacqueminot produced flowers of an exquisite carmine colour, but the growths resembled neither parent, being more like those of a Noisette. One of the brightest-coloured rugosa Roses I have seen is the single variety from the same source—a cross between R. rugosa and General Jacqueminot. It is quite a rich crimson, just the colour required, and must be a valuable Rose for planting in large masses as cover or for hedges, and will probably supersede the type if it fruits well, because this latter kind is not a very taking shade of colour. A lovely Rose is Hargita, a hybrid, I should imagine, between Blairi No. 2 and R. rugosa. The semi-double flower had just the same style as Blairi No. 2, only the colour was a much deeper pink, merging almost to carmine. The growths were also inclined to red, although very spiny, as in R. rugosa. A grand Boursault variety named Calypso will be in great demand when it is put into commerce. As seen here, the flowers are immense; one bloom measured 5 inches in diameter. The colour is a soft pink and the blooms semi-double. As a rule the Boursault Roses are not very attractive, but this one entirely supersedes all previous kinds of this

tribe. On the rockery was seen a very pretty Rose named *Malyi*. The colour of the flowers was a rich deep rose, merging almost to crimson. An immense bush quite 12 feet through of *Rosa sericea* attracted attention, it being at the time of my visit a perfect mass of white, faintly lemon-tinted blossom. This variety resembles *R. spinosissima altaica* in bloom, although it is not so large. Some very dwarf forms of *Rosa gallica*, such as *nana* and *pumila*, would be useful on rockwork, the latter only growing about 1 foot high. A pretty little gem I came across was named *R. spinosissima var. picta*. The flowers were each not more than half an inch across, of a rosy crimson colour edged with white and the centre lemon-white. *Rosa rugosa* crossed with *macrantha* had growths resembling the former and flowers like the latter in shape, but not quite so large. The colour was a beautiful clear pink. *Rosa ferox* from Canon Ellacombe, though not in flower, was interesting. It has tiny foliage, smaller than in *Wichuraiana*, but in appearance much resembles the hedge Briers. Not the least interesting were some hybrids of *R. ferruginea* or *rubrifolia*. The foliage was not quite so red as in the type, but very glaucous and the flowers were of a good size.

Here at Kew one can see the true value of *Rosa multiflora*. Huge bushes smothered with blossom were a perfect picture. The blooms were very small, but the quantity contained in each corymb makes the show. A splendid form of this Rose is *R. m. Thunbergi*, a variety that has already received a notice in these columns. The double form of *R. multiflora* was also very pretty, and was growing most freely in the dell. It is to be hoped the various hybrids noticed will be distributed, also some forms of *rugosa* noted last season. The tribe is so very valuable by reason of its hardiness, that we may well desire to see the numbers increased if the colours can be improved. This would not refer to varieties like *Blanc double de Courbet* and *Mme. G. Bruant*. We are quite content with the snowy purity of these two, and would not desire any alteration in them, but I allude more especially to the washy rose colours that never appeal to one's idea of beauty. PHILLOMEL.

Rose Mme. Willermoz (Tea-scented).—This is one of the hardiest of the Tea-scented Roses, of somewhat cupped form when expanded. The delicate fawn and creamy shading upon a white ground gives a fine appearance to the flower. It has been sent out now over fifty years, and was introduced by the late M. Lacharme, a raiser who has given us so many grand Roses. It produced a pink sport named *Letty Coles*, which created a slight stir when sent out, but it has long since gone out of cultivation.—P.

Rose Daniel Lacombe (hybrid multiflora).—This is a delightful rambling Rose. One thing is certain, that this will blossom on young plants; whereas some of the newer introductions appear to be very shy in blooming. The chamois-yellow buds, if very tiny, are nevertheless extremely pretty, and the open flowers, which are about the size of those of *Crimson Rambler*, are at first flushed with clear rose, then change to white. I can conceive of nothing more lovely than a fine plant of this Rose covered with the pretty trusses of blossom. It has a musk-like odour, which points to the probability that it is a hybrid between *R. multiflora* and *R. moschata*.—P.

Rose Kronprinzessin Victoria (Bourbon).—This sport from *Souvenir de la Malmaison* is very beautiful. Its flowers are milk-white, suffused with a faint lemon tint, and are most attractive upon the plant and when cut. Like its parent, it is lovely in the autumn as well as during the summer. It does not appear to be quite so free in growth as *Souvenir*, but it is not a bad

grower. I should not recommend it as a standard, but as a bush it is first-rate. I can see little or no difference between this kind and one introduced eight years later named *Marie Thérèse de la Davansaye*. Certainly they are not both wanted.—E.

Rose Dr. Rouges (Tea-scented).—A further acquaintance with this Rose has confirmed my first impression, that it would prove a most useful variety. The colour seems to come midway between that of *Marie d'Orleans* and *General Schablikine*, but the outer petals are of a far richer rose colour than in either of these kinds and there is also an orange shading. Apart from the delightful tint of colour the flowers are also very prettily formed, the petals not only being pointed similar to a *Cactus Dahlia*, but they are also curled at the edges. The plant, although of climbing habit, flowers very freely grown in bush form if the growths are left about 2 feet long when pruned.—P. L.

Moss Rose Reine Blanche.—Apart from the beauty of its flowers, this Rose has the most tender green foliage of any variety in cultivation. The leaves are of such a pale green shade as to amount to almost golden green. It is a very old kind, but I believe it is not much known. It has been considered by some to be too much like *Comtesse de Murinais*. A great difference, however, is manifest when they are placed together. In the case of the variety under notice the blossoms are very pure white, not quite so paper-white as in *White Bath* or *Blanche Moreau*, but certainly purer white than in *Comtesse de Murinais*. As a garden Rose it is excellent, for it grows and blossoms freely and it can be propagated easily by layers. These beautiful white Moss Roses are always interesting: the pretty buds, peeping out amid a mossy and in some cases Fern-like encasement, appeal to all lovers of old-fashioned flowers.

Rose Pink Rover (Hybrid Tea).—Fragrant Roses find a warm welcome even if there are slight blemishes in the variety. But in this case we have a Rose that not only grows well and flowers well, but its blossoms are in the half open state of a fine globular shape. There is not the finish in the outer petals one would like to see, but this is a small matter, and when we sum up its good points this defect is not noticed. The exquisite pink tint of the inner petals, resembling that of *Souvenir d'un Ami*, verges to silvery white near the outside. I prefer this Rose to *Climbing Captain Christy*, for in *Pink Rover* we have perfume, vigour and good colour, whereas in the latter, although the two last-mentioned qualities are there, the fragrance is wanting. *Pink Rover* is not exactly a rambling kind like *Gloire de Dijon* or *Rêve d'Or*; it, however, grows extremely well and quickly covers a wall. I like to see it in pillar form or growing as a standard. I would advise anyone wanting a good light pink or free-growing kind to plant this Rose, and I feel sure he will be satisfied. Many of these vigorous-growing kinds would be in greater demand if planters only knew their value as bushes, especially to grow in the vicinity of large towns. I have this Rose, *Gloire de Dijon*, *Mme. Berard*, *Reine Marie Henriette*, *Bouquet d'Or*, &c., flowering most profusely upon two-year-old plants. The growths of these plants when pruned were left about a yard long and the laterals shortened to 6 inches or 9 inches. They have now from two to three dozen buds and blossoms upon each bush of really good quality, free from that stunted, crippled condition too often found upon wall plants.—P.

NOTES AND QUESTIONS.—ROSES.

Rose Felicite Parmentier.—The old Roses of which the above is one of the loveliest can never be entirely expunged from our gardens. It is not from sentiment that this one should be retained, but simply for its own intrinsic value. Though not a large Rose by any means, it flowers in good clusters, so that the plant is very showy when in full bloom. The exquisite warm flesh-pink colour of the outer petals

and edges nearly white make it a great favourite. It must not be confounded with *Felicite-Perpétue*, a totally different Rose.—P.

Rose Crested Provence.—The fragrant old Cabbage Rose will always remain a favourite, and the above lovely variety, which is possibly a sport from it, in like manner is much esteemed. This, too, is very sweet. The peculiar crested Fern-like formation of the calyx gives the flower a most unique appearance. I think nothing is more beautiful than a spray of this Rose with the centre flower full blown and surrounded by several of the quaintly crested buds. It is a good grower, suitable alike for standard or bush.—P.

ORCHARD AND FRUIT GARDEN.

MANURE FOR VINES.

THE old idea that to grow good Grapes it is necessary to feed them upon all the garbage and filth of shambles and stock yard dies hard. Recently a visitor here on seeing large, well-finished bunches of Grapes in the early vineyard asked me what I had fed them on. On mentioning a well known manure he made a note of it and departed, evidently under the impression that the whole thing depended upon getting this and no other. But it is hardly necessary to point out that no amount of actual manuring can of itself be depended upon to grow fruit of good quality. That manure is necessary goes without saying, but it is a mistake frequently made to think that feeding liberally will make up for errors of culture. This it can never do, and applying a lot of strong manures, whether natural or artificial, to Vines, the roots of which are out of order or running in an unsuitable medium, is so much waste of time. It would be useless to feed a starving child on heavy, substantial food that only a strong man could digest, and it is the same in plant life. Before the Vine can assimilate and use a large amount of manurial constituents, there must be vigour and health in the plant itself, built up gradually and even slowly in some cases it may be, but none the less they must be there.

This is very often the rock that many founder on when making up borders or composts for Vines. Instead of giving a make up that roots can enter freely and ramify in, over-rich manures are used that only the strongest roots can enter, and these, as is well known, are not the best fruit producers. It is not enough that plant food shall be present; it should be in a form immediately available by the roots and to ensure a constant supply of plant food borders should be constructed of such material that air filters readily through it. To this end the addition of such materials as lime rubble, burnt garden refuse and well made charcoal undoubtedly tends. Cold, sloppy manure could never have the same effect, while that of artificials in many cases is but fleeting. Bones are one of the most useful aids to Vine culture, acting in the dual capacity of a mechanical agent to keep the soil porous and containing some of the most essential of plant foods which are given off slowly but surely over a very long period. These, of course, may be overdone, the exact quantity required largely depending upon the class of loam used, whether this is rich or the reverse. The large amount of lime in bones makes them a useful addition to soils deficient of this, but of course this constituent may be applied much more cheaply than by the aid of bones. Quick or newly-slaked lime should not be too freely used, as it has the effect of fining down the soil considerably, and this is why I always prefer the old mortar rubble to the more genuine article. There is not so much active lime in it, but it has a

better and more lasting effect upon the compost. In borders made up of this class of material the roots are soon running all through them, and being trodden and rammed very firmly when putting together, they will be of the best class for fruit production and the formation of sturdy, short-jointed wood. Then when a sudden call is made upon the resources of the Vine there will be hundreds of fibrous roots, their points hungrily seeking the necessary food constituents which may be provided by quickly acting chemical manures, aided by frequent doses of tepid liquid manure. The results of these will soon be manifest.

H. R.

Strawberry Lady Suffield.—This is a very distinct Strawberry, and, as I think, one of the highest flavoured in existence, combining as it does distinctly the Hautbois flavour with that of British Queen. Those who saw the exhibit of this Strawberry at the recent Temple show will hardly doubt its high flavour even if they had not the privilege of tasting it, for the aroma was most powerful, and one could not come within a dozen yards of the few plants shown without catching the delicious perfume the fruit exhaled. As shown, it appears to be a free cropper and a healthy grower; the fruits were not over-large, but quite large enough for all but those who care most for monstrosities. The high quality possessed by these pot-grown fruits shows this kind to be of the highest class, and one that is bound to become a standard variety with all who appreciate quality of the best. One can only hope that it will prove to be a variety suitable for all gardens.—J. C. TALLACK.

Strawberry President.—This Strawberry has been so long in cultivation and it is so well known that it is quite needless to describe it. I consider it an excellent kind in every way and used to grow it regularly. The plants always did well and ripened up a good crop of fruit, yet at the present day it is very seldom seen in good condition under glass. Ask nine out of ten experienced gardeners their opinion of it for forcing, and it will not be a good one. In conversation with a very capable gardener to-day he tells me that President has been the only failure this year among the forced plants. Why is it so is a question I have frequently asked, and never yet found a satisfactory reply. President is a good distinct Strawberry even now, despite the shoals of new kinds we get annually, too good to lose from our collections. It frequently fruits well and constantly in light sandy soil, where many of the newer kinds would fail, while if not in exactly the first flight for flavour, there are many no better that receive a great deal more attention, and certainly it is far before the large showy kinds that are now so popular. I cannot help thinking that there must be something wrong in the treatment that fails so utterly with President.—H. R.

Young wood on old fruit trees.—Though agreeing with the main points of "J. G.'s" note on p. 413, I must take exception to what he says about Vines. It is not the close pruning which accounts for the laterals not showing bunches, but the general weakness or ill-health of the canes; and it is to be hoped that the art of growing old Vines which will continue to produce good bunches from closely pruned spurs will not eventually be lost. I do not for a moment doubt that there are many old and sparsely spurred Vines which would be all the better if they were cut out in favour of vigorous young canes from the base, but to attribute the cause to the short-spur system of pruning is obviously a mistake. That the short-spur system is good when other conditions are favourable is illustrated in instances frequently to be met with of old Vines which in spite of age continue to produce as good Grapes as ever, and in face of the fact that at no pruning have there been more than one or two eyes left. The tendency at the present day seems to be that of trusting too much to young Vines

and fresh canes, whereas a thoroughly established and well treated Vine will go on bearing for an almost indefinite period. It is not the close pruning, but wrong treatment and neglect that are the prime causes of failure in old Vines, this necessitating their being cut out and young canes brought up to take their places.—H. H.

MULCHING STRAWBERRIES AND BUSH FRUIT.

MULCHING fruit trees is often carried out in a half-hearted manner, unsuitable material being used, and the time and way in which it is applied not calculated either to keep the fruit perfectly clean or to retain the moisture in the ground. The time at which Strawberry plants are mulched should be regulated entirely by the nature of the soil in which the plants are growing. In strong, retentive soils the work may safely be deferred until the bloom-trusses are well advanced or about to open, but in sandy mediums such delay would in the majority of seasons prove injurious to both plants and crop, as what moisture is in the ground soon disperses at this season unless retained by liberal mulching. From neglect of this I have seen what otherwise was a promising quarter of plants give way just when the fruit was commencing to soften. For a number of years I had to deal with a light, porous soil. Strawberries did very well, but only when the ground was mulched at the latest in January. I always got it on if possible in December, using short strawy material well saturated with urine from the piggery. Two birds were thus killed by one stone, the roots being nourished and the litter washed clean by winter rains, keeping the ground moist and the fruit clean. In my opinion this is how Strawberries should always be dealt with on light soils. On strong soils where mulching is performed in May or June nothing equals Bracken. If this can be cut, dried, and stacked in autumn it can be cut out in trusses, and nothing is so sweet and clean. A little lime should be sprinkled round the base of the plants previous to ward off slugs. The next best material is short strawy litter. Grass mowings should never be tolerated. Where practicable, I would also mulch Gooseberry and Currant bushes with Bracken. It keeps the fruit on the lower parts of the trees clean, which would otherwise be splashed with dirt by heavy rains and thunderstorms. In this case also the mulch should be applied in good time. All this may seem a laborious task, but if done systematically it is not really so. J. CRAWFORD.

THE EARLY STRAWBERRIES.

SEASONS and soils vary so much that dates differ greatly as regards the ripening of fruit. This season my earliest Strawberry is Royal Sovereign, which was gathered on June 12 from a south border. I am aware the date given is not particularly early, as a few years ago I gathered Noble and No. 1 on May 29. It is only fair to add the fruits could not compare with those just ripe, which are very large and of good colour all through. Even for West Middlesex June 12 is early, as the season has been one of the most unfavourable for Strawberries I ever knew, as from 4° to 7° of frost the third and fourth weeks in May, then a wave of heat, and since then cold east winds have told sadly upon tender fruits. The frost killed a lot of the Strawberry blooms. Fortunately, the fruit set and of a fair size escaped injury. I still use long litter as a protector, and this may be made good use of in a cold season. It is not made firm round or under the plants, but is left loose, and in case of frost placed thus it answers well, as it covers the spikes of bloom. Though it does not look very tidy, it is an easy matter to place it in position under the plants when the flowers have set. I am aware there is an objection to litter, but it is not much soiled, and if placed on the quarters early in May it is thoroughly bleached by the weather and

sweetened by exposure. I prefer it to long, clean straw, which in wet seasons lies too close and harbours slugs badly. Grass is bad in any form. To many the date of gathering and the earliness of the variety will be of most concern. So far I find Royal Sovereign the most reliable for early supplies. It is all the more valuable on account of its size, and size in early Strawberries finds favour with many, and, as growers well know, size influences prices greatly. For earliest supplies I rely entirely upon last year's runners, and there is no loss of space, as the plants need not be so far apart. This season my plants are smaller than usual, as owing to the heat and drought last summer they made poor progress after planting till the autumn rains favoured growth. I find I am earlier this year than last, but with a much lighter crop. Of course this only refers to the early varieties. Last year during the swelling period we experienced very dull cold weather. The earliest crops are always the best after a sharp winter, as, having a very light soil with plenty of sunshine in the spring, the soil soon gets warm and growth is rapid. Such soils, however, need much attention in the way of food and moisture to build up a heavy crop. Without moisture the fruit fails to swell away freely, red spider gains a footing and the crop suffers. By growing different varieties and with north and east borders I endeavour to eke out the season as long as possible. From four to six weeks is usually the time, the latter if the nights are cool and we get enough rainfall. This season I hope it may be longer, as I am giving the new St. Joseph and Louis Gauthier a trial and they promise well for late supplies. I am surprised to see what effect the cold weather had upon the flowers of what may be termed choice varieties, as fully half of the bloom is ruined. This applies to the Queen and Pine varieties mostly. In some cases the loss of a few flowers is not a serious matter, as the plants often bloom so freely, that they are unable to perfect the fruits. La Grosse Sucrée, a favourite early kind here and one that follows the Royal Sovereign closely, is much cut by the late frost. This is unfortunate, as it is a splendid variety. The useful Vicomtesse H. de Thury is much better. It appears to do well in any soil or position. I grow it largely for preserving on account of its flavour and firmness, as the fruits may be cooked whole. There are many other early kinds, but of late years I have reduced the varieties, as those noted are the best croppers and the flavour is good also. King of the Earlies was too small and John Ruskin does not thrive.

G. WYTHES.

Strawberry Empress of India.—I wish I could grow this excellent variety more strongly, for I have no better flavoured or finer coloured variety. But on this stubborn, heavy soil the plant does not seem to get the mastery, and should the winter prove very wet, a number of the plants turn yellow and collapse. When they do get through a season they are very free, and I have a couple of rows in passable order this year. The berries are not large, but a beautiful deep scarlet in colour, quite distinct from any other. Where it succeeds it is one of the very finest Strawberries in cultivation.—H. R.

Pruning Black Currants.—If, instead of leaving the old wood year after year, the wood with the fruit on was cut right out and taken away to a shed to be gathered, the produce of these useful bushes would be much finer and more plentiful. A little judgment would be necessary in some cases, of course, as there are bearing parts that cannot be cut out without damaging the bush, but in most cases the greater part may be removed, and the sucker-like growths springing from the base reserved for fruiting. In the case of old bushes, some of these also may be removed, and a thin, open bush results. The air and light reaching every part of it will be a great help to the crop.

Late-kept Apples.—A "Looker-On" does not seem very enthusiastic over Apples, however

fine, exhibited at the end of May. He is, I take it for granted, not a nurseryman, and has no trees to sell. Were he such he would know the value of an advertisement. But the presentation of a fine lot of Apples at the end of May redounds, I think, more to the credit of the keeper than to the fruits themselves, because it is so obvious that, let the fruits be ever so handsome in appearance, they have comparatively little intrinsic merit for eating or cooking after having been gathered some eight months. After all, except to show as an advertisement, are these fruits then worth keeping? Is the game for a private gardener worth the candle? Unless the fruits are as good in May as they may be expected to be in midwinter they are not worth keeping. Do what we may in growing and storing we cannot have such quality in fruits at that late period as we find in proper seasons and under ordinary conditions.—A. D.

NOTES OF THE WEEK.

Heperis matronalis lilacina plena.—This is a very distinct lilac-coloured form of the well-known double Rocket, and as such affords additional variety to these old-fashioned things. It is one of many useful things flowering with Mr. Perry at Winchmore Hill.

Paeonia Lemon Queen.—Though somewhat smaller than is usual, the one here named possesses the charm of a combined colouring of lemon-yellow and white. In the cupped appearance of the flowers, i.e., when about half expanded, these things are especially useful for cutting, and are then most effective.

Spiraea Aruncus.—I enclose a photograph of a clump of *Spiraea Aruncus* which has been taken by a friend of mine. It grew in the gardens here on the banks of the Wye. The clump is 18 feet in circumference and has produced sixty heads of bloom, many of which were 6 feet in height.—P. MACCABE, *The Gardens, Rotherwas, Hereford.*

Fabiana imbricata.—Although *Fabiana imbricata* is fairly hardy in the west of Scotland, I hardly expected to see it in bloom on a low wall at the Edinburgh Botanic Gardens this week. This Heath-like shrub is one which those who like to grow plants with which some have a difficulty ought to try. It is remarkably pretty and distinct.—A.

Lilium Thunbergianum Orange Queen.—This is an exceptionally good form, the chief differences being the decided tone of colour and the rather thicker and more decidedly obovate segments. In all these the variety is a distinct advance on any member of this dwarf section of the genus. Messrs. Wallace had nice blooms at the Drill Hall this week.

Saxifraga cochlearis.—Though the beauty of flowering in this plant is occasionally noted, it is rarely, if at all, that one hears anything concerning its fragrance, yet it is probably the most powerfully scented member of its race, and the strong Hawthorn perfume may frequently be detected at some distance. This is quite true of a large patch now in bloom.

Potentilla opaca.—We have a considerable number of dwarf *Potentillas* with yellow flowers, and several of these are grown in the Royal Botanic Gardens at Edinburgh. *P. opaca* this week looked rather well by reason of the manner in which the flower-stalks had arranged themselves. The centre of the plant showed a mound of green, while this was encircled by a line of the clear yellow flowers.—S. A.

Iris gigantea.—This showy *Iris* is doing well this year, and in spite of heat and drought a year ago when many things were parched up. At the time it was somewhat naturally thought this would affect the flowering of to-day, but it has not done so, for the plant is as free and as free as ever. Another very bold and well-coloured *Iris* now in bloom is *I. Monnieri*, the rich golden flowers surpassing in size and effect the majority of its kind. In one or two instances in the Drill Hall groups this week it was very fine.

Deutzia Lemoinei.—Though living at no great distance from Mr. Arnott, and with similar conditions in climate and position, my experience as to this *Deutzia* is so far much more favourable than his. *D. Lemoinei* came well through the severe March frost, and is now flourishing and just going to bloom. I think Mr. Arnott's plant must have been rather precocious. *D. discolor purpurascens* seemed a little more tender, but both are very young plants, so it is

not safe to pronounce decidedly yet.—W. D. R. D., *Castle Douglas, N.B.*

Viburnum plicatum in New Jersey.—With this I mail photographs of *Viburnum plicatum*, young plant and branch. As you probably know, this is one of the best of shrubs, in good soil growing thriftily and rapidly and flowering freely. The dark green attractive leaves are seldom injured by insects. Some of the flowers had been stripped from this plant before I took a photo of it. We had a long, cold winter and spring, but just now it is hot and dry as the desert.—J. N. GERARD.

Eriogonum sub-umbellatum.—This rather useful and distinct plant does not appear to be a very free bloomer in many places. I am reminded of this by seeing a large mass of it at Edinburgh growing very freely and covering a considerable extent in the rock garden, but with very few flowers upon the mass. I believe it flowers better in a crevice of the rock garden where it is not too dry than in a place where its roots receive but little moisture. The few *Eriogonums* we have are pretty in their own way.—S. ARNOTT.

Buddleia Colvillei in Surrey.—In your issue of last Saturday the Rev. T. M. Bulkeley-Owen, of Tedsmore Hall, asks if *Buddleia Colvillei* has ever flowered in England. It has bloomed with me for the past three if not four years, and is now in full flower. I imagine this *Buddleia* is hardier than is generally supposed (it endured 21° of frost on three successive nights in February, 1895, with very slight damage), and the difficulty of cultivation arises more from atmospheric conditions, such as smoke, than from any great susceptibility to cold. It is a very handsome shrub.—B. E. C. CHAMBERS, *Haslemere, Surrey.*

Some Shropshire notes.—*Onuris coccinea*, about which there has been some correspondence in THE GARDEN, flowers here very well. There are now over 20 spikes of flowers on the plant. It grows in a shady position on a rockery amongst blocks of sandstone; the soil is very light and sandy. It flowered well last year. *Deutzia discolor purpurascens* is a beautiful shrub, and though as yet but small, it has flowered well both this year and last. *Polygonum baldschuanicum* is in the trade. I got it from M. Lemoine in 1897. It seems quite hardy, but it has not flowered here yet.—T. M. BULKELEY-OWEN, *Tedsmore Hall, Shropshire.*

Brodiaea coccinea.—It is quite true that a single bulb or even a dozen can give but little idea of the value of this fine plant when grown on a large scale. It is evidently grown in this way by Mr. M. Prichard, Christchurch, who brought whole sheaves of the crimson flowers to the Drill Hall this week. Not only were the spikes unusually strong and vigorous, but the flowers also were fine and much bolder in outline than is usual with the plant. We never remember before seeing the plant so good, so strong, or in such numbers. It is clearly quite at home on the south coast and near the sea, and as such worth growing for its fine colour.

Herbaceous Lupines at Edinburgh.—A small collection of *Lupines* in the Edinburgh Royal Botanic Gardens is at present worthy of some observation. It appears as if we must mainly look to hybridisers and seedling raisers for variety among these. The species at Edinburgh do not differ in flower from each other in any marked degree. *Lupinus macrophyllus* is rather good with its spikes of purplish blue. *L. luridus* has that shade of lurid colouring which makes the name fairly applicable. *L. micranthus* and *L. hirsutus* are not particularly distinct as regards the flowers. *L. nootkaensis* is taller than it grows with me, while *L. bicolor* looks, perhaps, the best of the lot.—S. ARNOTT.

Primula sikkimensis at Edinburgh.—There is at present a capital mass of the Sikkim Primrose at the side of the pond in the Edinburgh Botanic Gardens. A good many plants are flowering extremely well, showing how much they appreciate the moisture drawn up from the adjacent pond into the bank on which they grow. *P. sikkimensis* is not generally a long-liver, but not only is its life usually prolonged, but its

beauty is largely increased when it is given a moist position in rather light soil—at least this has been my experience. Plenty of water in spring and summer is its main requirement. It is worth a good deal of trouble to secure healthy plants with tall stalks laden with the fragrant yellow flowers.—S. ARNOTT.

Geranium Phæum (Dusky Crane's-bill).—May I draw the attention of those of your readers who are interested in bees to the value of this plant, whose insignificant flowers possess such a remarkable attraction for bees. I have watched it closely for some time, and find while the blossom lasts it is covered with bees hard at work all day, and these the ordinary hive bees. From time to time I have grown various plants recommended for bees, and have found them more frequented by wild or humble-bees than their garden relatives. When allowed to grow undisturbed for some years, the Dusky Crane's-bill attains a good size and deserves a place in front of a shrubbery or in the wild garden.—S. C. WHITE, *Charleville, Roscrea.*

Dianthus Fettes Mount.—This is one of the best and most effective plants at present in flower in the rock garden of the Edinburgh Royal Botanic Gardens. A mass of its grey foliage freely covered with its double flowers of bright pink looks both showy and pleasing, while the fragrance of the blooms gives an added quality. This hybrid Pink, raised some years ago in the neighbourhood of Edinburgh, deserves to be brought to the notice of those who like Pinks with their delicious odours. Not the least of its good qualities is its perennial character. Unlike some of the mule Pinks, it gives little trouble in this respect and soon grows into large plants. On the top of a rockery and hanging over the stones the Fettes Mount Pink is one of the best of our June flowers.—S. ARNOTT.

Effects of the thunderstorm on Wednesday evening last.—This neighbourhood was visited by an exceptionally severe thunderstorm on Wednesday evening, accompanied by hailstones of large size. The effect of such a visitation has left its mark upon many plants in the garden. Splendid breadths of *Mignonette* have almost been spoiled, the foliage in many cases and lateral growths also having been completely broken off. *Michaelmas Daisies* in several cases have been more or less denuded of their foliage, and Tufted Pansies have suffered severely. The kitchen garden appears to have suffered quite as much as the flower garden, capital batches of Lettuces being completely riddled. This also applies to Cauliflowers, Cabbages, &c. Early breadths of Brussels Sprouts have their leaves completely broken—in fact, the effects are most disastrous. For some time the more sheltered positions were white with hailstones.—D. B. CRANE, *Highgate, N.*

Nymphaea odorata sulphurea.—Growers of *Nymphaeas* in tanks which admit of the water becoming warmed by the sun or otherwise should make a note of this lovely variety, especially the form called *grandiflora* by M. Marliac. The flower is of large size, nearly 6 inches in diameter, and of the peculiar starry shape of the odorata section, very full and of a rich clear yellow. With me it is the earliest of its section to flower and far the largest. The foliage is marbled with chocolate like that of most other *Nymphaeas* whose flowers are yellow. It also seems vigorous in habit and contrasts in shape of bloom very markedly with the well-known, but exquisitely lovely *N. Marliacea Chromatella*, another very vigorous form and now well known in many gardens. *N. Marliacea carnea* (bush) and *N. M. albida* or *candida* (pure white) are two other grand sorts. Even confined, as my plants are, in boxes, I have had several blooms over 6 inches in diameter, and many more fine buds are coming out. The first *Nymphaea* to flower with me is always *N. Laydokeri rosea*, and it keeps on blooming all the summer, as does the dainty little *N. pygmaea helvola*, and for weeks after the native *N. alba* has ceased till the weather of autumn becomes too dark and chill.—GREENWOOD PIM, *Monkstown, Dublin.*

TREES AND SHRUBS.

PRUNUS PSEUDO-CERASUS FL.-PL.

(JAPANESE CHERRY.)

ALL the forms of this species are valuable in the garden, and during the season when they are in bloom, which is the end of March and during April, there are no trees to equal them in beauty. The nearest rival among Cherries is the double-flowered Gean (*P. Avium* fl.-pl.), and this flowers a fortnight or so later.

In an interesting notice of this tree in his "Forest Flora of Japan," Professor Sargent says that in the forests of Yezo *Prunus pseudo-Cerasus* occasionally attains a stature of 80 feet. In this country it is rarely more than one-

There is, in fact, no tree that is better worth planting in quantity. The illustration shows its beauty in what are apparently not particularly congenial surroundings. To see it at its best, a grove of about a dozen trees should be planted against a background of Holly or Evergreen Oak. In Waterer's variety the flowers are of a delicate rose, and they are of exceptional size—frequently over 2 inches across. In the catalogue of the Yokohama Nursery Co. it is stated that there are more than twenty of these double varieties. One of them called Ukon is rather curious and striking. The flowers are of the ordinary size and shape, but the petals are suffused with a yellowish green tinge that might have suited the wearers of the green Carnation who developed a small craze a

26 inches in circumference. It usually flowers in May, and is sheltered by the house from north and east winds. The soil is clay, topped with marl. As the ground slopes down towards the spot occupied by the tree, the roots are always kept moist, and they extend principally under the gravel paths. It is neither manured nor pruned.

Osmanthus ilicifolius purpurascens.—This is decidedly the best of the numerous forms of *Osmanthus* that we have in our gardens. The varietal name is derived from the purplish tinge of the young leaves, especially on the under-sides. As the foliage matures the purplish tinge partially disappears, but not enough to prevent its being readily distinguished from the ordinary form. It is in every way a most desirable evergreen shrub, and the hardiest of the different kinds of *Osmanthus*. This variety does not appear to be so well known as it should, but as its merits are more generally recognised we shall doubtless meet with it more frequently, for its propagation is not attended with any difficulty. Cuttings taken at this time of the year, put into pots of sandy soil in an ordinary garden frame, and kept close and shaded till rooted will strike before the autumn. Among other features possessed by the *Osmanthus* is the pleasing fragrance of the tiny blossoms.—T.

Hydrangea petiolaris.—A large plant of this *Hydrangea* on the north side of the herbaceous ground wall at Kew is flowering freely, and it is both an interesting and attractive shrub for such a position. In habit it is widely removed from the commonly known *Hydrangeas*, being quite a climber, attaching itself to the wall by means of its aerial roots exactly as the Ivy does. The large flattened corymbs of blossoms consist for the most part of the small fertile ones, the large sterile flowers which constitute the showiest portion of the inflorescence in the case of most of the *Hydrangeas* being limited to a scattered few around the outside of the cluster. Still, for all that they are sufficiently numerous to make a goodly show. In colour they are whitish. Besides its value as a wall shrub this *Hydrangea* is just the thing for rockwork, as it will clothe even large boulders with quite a network of its long, flexible stems, held in position by innumerable roots, which attach themselves to nearly everything within reach. At the same time it is not of a particularly aggressive nature, and may be readily kept within bounds, while it is perfectly hardy. This climbing *Hydrangea* boasts a plurality of names, as besides that at the head of this note it is also known as *H. volubilis* and *H. scandens*, as well as *Schizophragma hydrangeoides*. This last is a distinct plant, but the name is often applied to this *Hydrangea*, which it much resembles.—H. P.

Halesia diptera.—Among the May-blooming shrubs none surpass the *Halesias*, with us so profusely do they bloom, the branches being literally wreathed in snowy blossoms. *Halesia tetraptera* (the Snowdrop Tree) is pretty well known in English gardens, but the subject of this note I do not remember to have seen there, nor indeed is it offered in the lists of some of the best nurserymen on this side. At first I thought the distinction was a mere botanical one, the name denoting its two-winged fruits as compared with the conspicuously four-winged fruits of *H. tetraptera*, but after three years' observation of its behaviour here I note it has one distinct attribute that commends it to favourable notice. It is decidedly later in flowering, as proved by a number of trees we have in widely separated parts of the park, but more especially can this be seen in one particular group where are half a dozen specimens of each species. At the time of writing (May 29) every flower has fallen from the branches of *H. tetraptera*, whilst *H. diptera* is in full bloom. If there is any difference at all in the flowers individually, I should say that those of *H. diptera* are rather the larger, being longer, with more acute petals. This is but a minor feature, however, its great value being in its later season of flowering. Nicholson mentions



Prunus pseudo-Cerasus fl.-pl. in Mr. C. Beckingham's garden at Palmer's Green, London, N.
From a photograph by Mr. F. Connell, 3, Blenheim Place, St. John's Wood.

fourth that height. By the Japanese it is cultivated for flowers more than any other tree. How much they value it may be gathered from the following extract:—

For centuries they have planted these Cherry trees in all gardens and temple grounds and often by the borders of highways, as at Mukojima, near Tokio, where there is an avenue of them more than a mile in length, and at Koganei, where a century and a half ago 10,000 Cherries were planted in an avenue several miles long. The flowering of the Cherry tree is an excuse for a holiday, and thousands of men, women and children pass the day under these long avenues in more or less hilarious contemplation of the shoots of bloom.

In England it is a perfectly hardy tree, and the flowers are rarely injured by bad weather.

few years ago. This variety was introduced some six or eight years ago by Messrs. Veitch. Another very fine form was given a first-class certificate at a meeting in May of the floral committee. It was brought from Japan by Mr. J. H. Veitch and bears his name. The flowers are of a charming shade of pink. *Cerasus Sieboldi rubra* is another good form of this tree; still, as I have said before, all of them are worth growing.—W. J. B.

Mr. C. Beckingham, 9, The Villas, Palmer's Green, N., in whose garden the tree figured is growing, sends us the following particulars concerning it:—

The tree represented is estimated to be about eighteen years old, is 25 feet to 30 feet high, and is grafted. At the ground-level it measures

H. diptera in his "Dictionary of Gardening," but I do not find it mentioned at all in Gray's "Manual of Botany of the Northern United States," although H. tetraptera is given, with its distribution as "from Western Virginia to Illinois and southward." Both species seed freely here each year. — A. HERRINGTON, Madison, N.J.

NOTES FROM OFFINGTON.

It is not often one meets with *Clianthus puniceus* in good condition. Being generally grown under glass and much subject to red-spider, it is often the reverse of satisfactory. Where, however, it is seen in good condition it is most attractive. I lately saw a fine plant in the gardens of Capt. Gaisford, Offington, near Worthing. The plant was growing against a wall and was covered with its bright red blossoms. It is, perhaps, only in favoured positions that it can be grown out of doors, but where sufficient shelter can be given it is certainly one of the most desirable plants for covering a wall. It was about the middle of May when I saw it, and it then appeared to have been flowering for some time and likely to continue.

In the same garden I saw several other semi-hardy plants flowering freely out of doors. In the north of London I found the first frost of any severity would kill *Clematis indivisa*, yet in the above garden I found it had stood out of doors for years, and at the time of my visit was in full flower, growing beside *Edwardsia grandiflora*, which was carrying large trusses of bright yellow flowers. *Ceanothus Veitchi* was a mass of deep blue. *Rhynchospermum jasmynoides* and *R. pulchellum* also have withstood several winters. I was surprised to see *Habrothamnus elegans* outside. A large plant of this against a wall was just showing bloom. Some fine bushes of *Xanthoceras sorbifolia* were just opening their flowers. *Daphne Mazeli* (variegated foliage and flowers somewhat like those of *indica*) and *D. fioniana*, the latter a mass of deep mauve flowers giving off a rich perfume, were also in bloom. Several *Magnolias* were in flower. A large bush of *Cytisus scoparius* *Andreanus* showed how well suited this beautiful Broom is for the garden, being a mass of richly coloured blooms. *Cytisus purpureus* and *Cytisus elongatus* were flowering freely. Many other beautiful things might be enumerated all of which seem to be at home in this old English garden. A. HENSLEY.

Azaleas.—The various sections of Azaleas, in considerable numbers and forming groups of varying sizes and shapes, have been splendid this year. For size of bloom, the palm must be given to the Boskoop seedlings of *mollis* and *sinensis*, and if anything is lacking in the masses they compose, it is the want of a few more deep yellows, something after the style of Anthony Koster, sprinkled amongst them. Taken altogether, the variety, depth of colour, and the immense size of the blooms are remarkable and quite a revelation. Owing to the intense heat and drought the blooming season proved shorter than when cooler weather prevails. I should be pleased to see more of these beautiful free-blooming hardy shrubs planted in thousands up and down the country. Their chaste and subdued colours and exquisite perfume would add beauty to many a hill and glen now occupied with far less worthy subjects, and, excepting on the limestone, they need no special preparation, merely fairly good light soil free of tree roots and coarse herbage and a modicum of light and air. — J. R.

NOTES & QUESTIONS.—TREES & SHRUBS.

Weigela Eva Rathke.—While *Weigela* or *Diervilla praeox* is on p. 422 referred to from the fact that it flowers in advance of any other variety, this is of equal value in that it serves to prolong the flowering season of this beautiful class of shrubs, being in full bloom when they are nearly, if not quite, over, while a succession is kept up till summer is well advanced; in fact, sometimes till autumn sets in. This *Weigela* is now pretty well known and generally

cultivated. The flowers are of a rich crimson tint, and larger than in some of the older varieties of the same colour. A bed of this kind is particularly attractive just now at Kew. — T.

GREENWAY, SOUTH DEVON.

On the lower Dart, opposite the picturesque village of Dittisham, embowered in Damson trees that in the spring-tide of the year shroud the low-eaved cottages in a wealth of snowy blossom, and hard by, where the storied "Anchor Stone," midway between the rock-margined, tree-clad shores, divides into two channels the lovely river, here at its narrowest, and sends the circling eddies to dimple the placid surface amid the sun-flecked shadows that lie beneath the overhanging boughs now verdant with unnumbered leaves, is situated Greenway, one of the South Devon seats of Mr. T. B. Bolitho, M.P. From the Reed-thatched boat-house on the river's verge the grounds slope steeply upward, thickly clothed with trees, until they reach a higher level, whence to the southward a charming view is gained of the river Dart, flowing seaward between densely wooded banks, its waters blue beneath the unclouded sky.

Many rare and beautiful plants and trees flourish on the walls and in sheltered nooks of the interesting gardens. Several large specimens of *Clianthus puniceus* were at the time of my visit covered with a profusion of their great crimson-scarlet blossoms, whose formation has led to the name Lobster-claw being applied to the plant. A fine bush of *Acacia armata* some 5 feet in diameter was yellow with flower, and the single white *Rosa levigata*, that succeeds so admirably at Kingswear, at the mouth of the Dart, was also in bloom. Other plants at home on the sunny walls were the scarlet-flowered Mexican *Inga pulcherrima*, *Bignonia capreolata*, and *B. (Tecoma) radicans*, *Callicarpa rubella*, a native of China, the handsome white-flowered *Swainsonia albidiflora*, and the pale blue *Plumbago capensis*, which was growing strongly on a sheltered exposure. In places where this plant will exist through the winter in the open, as it has proved its capability of doing in not a few favoured spots in South Devon, it creates a lovely effect when plentifully set with its silvery blue flower-clusters in the late summer or early autumn, its colour being quite unique in the garden. The sweetly-scented *Rhynchospermum jasmynoides* was represented by a vigorous specimen some 10 feet in height, and the Chilean *Barberidopsis corallina*, *Chorozemas*, *Pomegranates*, *Hydrangea scandens* and the yellow-blossomed *Piptanthus nepalensis* also evidenced by their health an appreciation of their surroundings. Banksian and China Roses rambled up high old walls and were approaching the zenith of their beauty. Choice *Rhododendrons* were doing well on a slope the soil of which had been removed and replaced by peat, and many fine forms were in bloom, amongst which were noted *R. Aucklandi*, *R. Falconeri*, *R. Dalhousianum*, *R. fragrantissimum*, and *R. George Hardy*. Of shrubs and trees, many fine *Dracenas* were already commencing to throw out their scented flower-spires a specimen of the Fire Bush (*Embothrium coccineum*) had expanded its vermillion flower-clusters, but is far inferior in size to one in Mr. Bolitho's garden at Trewidden, Penzance, which is held to be one of the finest, if not absolutely the largest, in Great Britain. *Eucryphia pinnatifolia* from Chili was present. *Metrosideros robusta*, 10 feet in height, was in vigorous health and flowers well in its sheltered site; *Correa bicolor* had made good growth; and *Camellias*, *Choisya ternata*, *Garrya elliptica*, and the commoner *Rhododendrons* had made enormous bushes, one of the latter having attained a height of close upon 30 feet. A fine specimen of the rare Chilean tree *Guevina Avellana* had formed a well-furnished specimen 20 feet in height; the Strawberry Tree (*Benthamia fragifera*) was showing its pale yellow flower-buds; *Photinia japonica* had attained a stature of 20 feet, a height that is

supposed to be rarely exceeded by this subject; while fine specimens of Japanese Maples, *Eleagni*, and other handsome shrubs were conspicuous amid the wealth of foliage, and the great New Zealand Flaxes (*Phormium*) flower well year after year. The hardy Palm (*Chamerops Fortunei*) was well represented, and Bamboos had formed graceful clumps on the sward. In an isolated position on the lawn is a splendid specimen of the Tulip Tree 50 feet or more in height and of great girth, while a towering *Wellingtonia* has attained a stature of 90 feet, and its trunk at 2 feet from the ground measures 21 feet in circumference. On the eastern side of the house a small rock garden was formed some years ago. It is constructed of limestone, and occupies a position on a steep slope facing south-west. The arrangement is at the same time natural and artistic, and in it many alpine plants are flourishing, such as *Androsaces*, *Saxifrages*, *Campanulas*, *Sedums*, *Gentians*, *Dianthus*, with *Mesembryanthemums*, *Aubrietias*, and *Alyssums*.

S. W. F.

Wall edgings.—When in one of the most remarkable of Surrey gardens recently I noted how singularly effective as covers or surface-edgings on low stone walls bordering the carriage-drive were such things as *Sedum acre aureum*, a mass of golden colour then some 15 inches broad and 10 feet to 12 feet long. Then would come an equal length of *Veronica prostrata*, a mass of blue, followed by a singularly effective length of *Thymus Serpyllum coccineus*, literally a mass of blood-red colour and beautiful beyond description. A little further would be seen a huge mass of the beautiful blue *Lithospermum prostratum*; next, perhaps, *Golden Stonecrop* again, then *Aubrietia Leichtlinii*, and so on, ringing the changes on these and other creeping plants with marvellous effect. How very possible is it by the employment of simple hardy creeping plants in this way to produce effects of great beauty. What a charm attaches to gardening of this description when it presents some break away from the common rut. — A. D.

GARDEN FLORA.

PLATE 1229.

THE MANETTIAS.

(WITH A COLOURED PLATE OF M. BICOLOR.*)

THE species of *Manettia* figured is the best of the thirty known, so far as can be judged by the few that have been introduced into gardens and by herbarium specimens. It has been in cultivation about fifty years, but until recently it was practically lost and its place and name taken by a much inferior species, the correct name of which is *M. luteo-rubra*. I believe we are indebted to Mr. Godseff for the recovery of the true plant, he having found it in cultivation in the United States a few years ago. It is one of the most useful of stove twiners, rapidly covering a trellis or small pillar with its twining stems, and bearing a profusion of bright scarlet and yellow flowers almost the whole year round. It is easily propagated from cuttings. This and all the other species are natives of Tropical America. The best of the others are:—

M. CORDIFOLIA, which has shining green glabrous heart-shaped leaves, the largest 2 inches long, and slender-stalked, drooping, tubular, quadrangular flowers each over an inch long, with small recurved lobes and coloured bright rose-red. "This truly beautiful plant, raised from seed sent by Mr. Tweedie from Buenos Ayres . . . is just now opening its first blossoms, and being covered with a profusion of buds in every stage, it pro-

* Drawn for THE GARDEN by H. G. Moon in Messrs. Sanier's nursery at St. Albans. Lithographed and printed by J. L. Goffart.



misses to be exceedingly ornamental during many weeks."—(*Botanical Magazine*.) It is grown in the Palm house at Kew.

M. MICANS was introduced from Peru by Pearce, collector for Messrs. Veitch, about thirty years ago. It differs from the other two in that it produces its bright orange-red flowers in leafy panicles, whilst its leaves are each 3 inches or 4 inches long and are ovate, not cordate at the base. It used to be grown at Kew, but is not there now. I shall be glad to learn if it is still in cultivation anywhere. There is a figure of it in the *Botanical Magazine*, t. 5495 (1865), where Sir Joseph Hooker said it was by far the most beautiful species known to him. The genus is closely related to *Bouvardia*. W. W.

THE WEEK'S WORK.

KITCHEN GARDEN.

LEEKS, MAIN CROP.—It is now quite time the main batch of Leeks was transplanted. The best Leeks are grown in trenches, although on extra strong, retentive soil excellent results are obtained from planting on the level. If the manure has now to be dug in, see that it is in a well-decomposed state. Where ground is limited, three, or even four, rows of plants may be grown in one trench, extra care, however, being necessary in earthing up to prevent the soil entering the centres. The bed should be well soaked with water a day or two before planting and the seed-bed also, the young plants being carefully lifted with a small hand-fork. I cut a small portion of the top off with a sharp knife and drop each into holes made with a dibber, so that the foliage is just below the surface, watering afterwards with a fine rose. Of course, where ground is no object the one-row trench is the best, especially if exhibition produce is desired. Any small plants left in the seed-bed may be planted rather thickly on any convenient piece of ground, these coming in very useful for drawing for flavouring. The Lyon and Musselburgh are still very hard to beat, Dobbie's Champion being a grand variety for exhibition.

PEAS.—In many districts, especially on warm, shallow soils, second early Peas have had a somewhat hard time of it owing to the absence of rain. The value of early mulching will now be seen, as it not only enables the first formed pods to swell to a normal size, but also the secondary batch to come in. Where no other material is at hand, grass mowings may be used for mulching the rows. A good soaking of liquid manure or even clear water over this will often keep Peas growing until rain falls. On moist ground where any tall-growing varieties have overtopped the stakes, pinching out the terminal growths may be practised, this preventing the haulm falling about and hastening the filling of the pods. Where growth has fallen through between the stakes, stout string or tar-twine may be stretched along to keep it in its place, this being easily secured here and there to a stout stake. May-sown crops sufficiently advanced should be staked at once, as if allowed to fall about they never do so well after. Where another sowing is to be made for extra late gatherings, Chelsea Gem or William Hurst will be found as remunerative as any, allowing a space of 3 feet between the rows. Rows now in bearing should be closely picked, as this aids successional pods to fill properly, especially during hot, trying weather. All first and second early lots of haulm should be cleared off the ground as soon as possible, if only for neatness sake. These plots will often prove useful for late greens or for the earliest plantings of Rosette Coleworts.

EARLIEST TOMATOES.—Many batches will by now have reached the limit of trellis room, and fruit will have set up to that point. Where plants set fruit badly towards the lower parts, a few shoots may be laid in over the old stems, removing a portion of the foliage to avoid crowding. These may be pinched when they reach

that portion of the plant bearing green or half-ripened fruit. For many years I grew my earliest crop in a lean-to house, the pots standing on a shelf close to the front lights, growth being trained up a trellis on the single-rod system. Beneath the shelf in question, and at some 2 feet distant, there was a second, which accommodated an additional row of plants brought on at a later date. As the crop ripened and was cut from the lower parts of the first batch of plants the growths of the successional lot were trained up immediately by their sides, the leaves of the former being removed by degrees. By adopting this double batch system, even in a moderately sized house, it is surprising what a weight of fruit can be obtained.

MARROWS IN FRAMES.—Where these were planted out as soon as the earliest frame Potatoes were lifted, they will now be in a bearing state, and of such a size as to require much more root moisture and nourishment than before any fruit formed. If the plants have reached the sides of the frames, the best thing will be to remove the lights entirely and allow the Marrows to ramble over the sides and ends. Go over the plants and remove any weakly growths, these being of no use, but rather hindering the ingress of sun and air from the most fruitful growths. It is a good plan at this stage to mulch over the surface for some distance round the stems with decayed manure, as Marrows require much moisture. An occasional good soaking with farmyard liquid one half its strength will be of great benefit to Marrows. Remove all fruits as soon as full size is reached, as leaving them has an impoverishing effect, and Marrows will keep in a usable condition for some time if placed in a cool, even temperature. Any plants that have been grown in pots, for supplying a few early Marrows may now be thrown away, the frame ones keeping up the supply. J. C.

FRUITS UNDER GLASS.

VINERIES.—When many varieties of Grapes are grown together in one house it is almost impossible to deal in the best way with all, and one of the most troublesome things with which the grower has to cope is the tendency shown by some, of which Madresfield Court may be taken as a type, to splitting just before the fruit ripens. Whatever may be the actual cause of this splitting, it may be accepted that any great fluctuations between drought and moisture either in the atmosphere of the house or in the soil of which the border is composed are certain to bring on an attack; consequently it is such fluctuations that we ought to avoid by keeping the atmosphere fairly charged with moisture, and by so regulating the watering that the border is never entirely dry on the one hand, or given a big soaking on the other. It is sometimes recommended that the Vines bearing these splitting Grapes be allowed more latitude in the matter of lateral growth than others, but I have not found that this makes any difference provided care is taken to keep the laterals in hand in such a manner that no great amount of growth is removed at any one time. In a word, I pin my faith more to regularity of treatment in all things than to any one supposed preventive in particular, and have no reason to regret doing so. Where some of the big bunched varieties, such as Barbarossa or Gros Guillaume, are grown in the late house, these should now require shouldering up, and this should be done with the greatest care to preserve or to produce a handsome form of bunch tied out to the fullest extent possible consistent with the desirable compactness which is one of the good points of well-finished bunches. As rubbing the berries spoils their appearance, deftness in handling the bunches is necessary to preserve them from being marked. Most late Grapes require some amount of fire-heat to keep them going and to bring out their best qualities; consequently this should not be overlooked, and whenever the nights are inclined to be at all cold, it is wise to give them the benefit of sufficient fire-heat to keep the water circulating in the pipes.

MUSCATS.—These will in most cases be now advanced beyond the stoning period, and from this time onward a night temperature approaching 70° may be given with advantage, this not only giving greater size of berry, but, what is still a greater advantage, it brings the Grapes forward enough to ripen up while the sun has still a great deal of power, and this gives them the clear amber colour so desirable in the Muscat—a colour it never attains when ripened late in the season, however much fire-heat may be used. Feed the Vines with alternate doses of ordinary manure water and some concentrated manure, as the roots like a change of provender, but in both cases the manure should be well diluted, and I prefer to err rather on the side of weakness than on that of strength. Should the border be at all sour or badly drained, care must be taken not to give water in too great quantities, as Muscat Vines especially resent this, and their foliage will turn yellow under its influence.

PEACHES.—Early Peach trees which have been cleared of their fruits should be at once gone over with the knife and all surplus wood removed, so that what remains for next year's fruiting may have the advantage of ample room. Time should also be spared to cleanse the trees of any insect pests which may have gained a footing earlier in the season, and if mealy bug is present the only way of dealing with it is to look well over the stems of the trees and apply to all nests found a solution of insecticide strong enough to kill the brood. By attention to this at a time of the year when these pests are active, much future trouble may be saved. It is early yet to talk about ripening of the wood, and I only allude to it now to say that early ripening, and the consequent shedding of the leaf, are a mistake, and whenever I see any sign of this I am careful to apply a light shade to the glass, so that the leaves may be preserved as long as possible. Trees that are leafless during late summer are prone to cast their buds the following season. See that the roots have plenty of water and syringe overhead daily. This, together with plenty of ventilation night and day, will enable the trees to finish properly. Mid-season houses with fruit swelling on the trees should be kept moderately cool, and fire-heat may be entirely dispensed with or reduced to a minimum, for the trees do not like it, and with proper management in the matter of ventilating carefully and shutting up early, swelling goes on, or should go on, at this time of the year as quickly without as with artificial heat, and the fruit will certainly be better flavoured and coloured. Tie in the growths as they extend, but not in such a way as to cover and shade the fruits. Bring up to the light and support in that position all fruits which have a tendency to grow in an obscured position, and fix them so that the apex of each points towards the glass. Use the syringe freely up to the time when they show signs of ripening, and be careful only to use soft and very clean water, as the Peach in its later stages is easily disfigured by hard or dirty water. Above all things see that the borders are not allowed to become dry, and that the roots are well fed during the time still left in which to perfect the fruits.

PINES.—Continue to pot up into fruiting pots the stock of Queens as soon as the plants seem in a fit condition for the move, so that they may get well established and able to bear the cooler treatment which may be given in winter, for well-rooted stock can safely be kept in a lower temperature than those which are not so forward, and this lessens the need for hard firing at a time of the year when excitement or forcing is bad for the plants. Where there are the necessary conveniences for growing the main batches on the planting-out system, no time should be lost in establishing the plants in their beds. For such plants a good command of bottom-heat, that may be regulated as occasion requires, is a necessity, and unless this can be afforded it is best to stick to the pot system, a most convenient one where dependence has to be placed on fermenting material for the requisite heat. CORNUBIAN.

KITCHEN GARDEN.

NOTES ON EARLY POTATOES.

THE value of observation as to the quality and earliness of various kinds of vegetables, Potatoes included, is often negated by the absence of any particulars as to soil and locality, and as doubtless many correspondents will be relating their experience of varied kinds it would be a great help in forming correct conclusions as to suitability or otherwise for various soils if these particulars were given. In the garden from which I write the soil is heavy and unless plenty of opening material is used, practically unworkable unless caught just at the right time, while the situation is the highest part of Suffolk and very exposed. A good part is sheltered from north and east winds by a belt of trees and high Box hedges, and the border on which the Potatoes named are grown has been well worked and matured. As showing how some excellent kinds vary from year to year, I may mention that popular variety Ringleader. With respect to quality it is by far the best variety here this season. I have before recommended it as an excellent forcing kind owing partly to its short top and also the fact that the tubers are usually fairly regular, that is, there is not a number of small worthless ones when the earlier ones are fit for taking up. Last season the crop was good, but the quality was not first-rate by any means. Still, I think, taken all round, it will be hard to beat.

Ninety-fold I am growing for the first time this season, and I must say that I am very agreeably surprised with it. It is a strong, but not too vigorous grower, and is fit to take up very early. Planted on March 3 it was fit to dig on June 10, and the fine crop of beautifully-formed tubers was quite a revelation to me. And what is more important than appearance, the cooking quality of Ninety-fold is excellent. It is true that the newer kinds do not in after years always keep up their reputation, but, judging by its present form, this Potato should become a very popular kind in the not far distant future. Among the Ashleaf section I can find nothing to beat Hammersmith Kidney. The good quality of all these varieties is well known, but the fact of their being somewhat later than many of the newer kinds has led in many cases to the substitution of the latter for the first crops. But no collection of Potatoes will be complete without at least one or two of the Ashleaf kinds, and as far as my observations go on various soils I should select at least three in the order named, Hammersmith, Veitch's Ashleaf, and Myatt's. Sharpe's Victor I am still growing, and I see no reason for altering my previous opinion of it, though I still think there are spurious stocks of it in the market. But if, as noted above, Ninetyfold proves as good in the future as it has done with me this year there will be no need of growing Victor. Neither in my opinion comes up to the Ashleaf kidneys for flavour, though Ninetyfold runs it very hard, but both of them are distinctly earlier. There are several of the second early kinds that in cases where a large demand exists may with advantage be grown for filling the breach that sometimes exists after the stored tubers have passed their best and before the usual second early lots are ready for digging. Those I have found useful are Early Rose, Reliance, and Satisfaction. The first of these is too well known to need description. Reliance is a good kind, but does not keep to the true kidney shape on this soil. This is, I believe, contrary to the experience of others, but I speak of it as I have found it. Satisfaction has, I think,

been more grown by farmers than gardeners, and a friend of mine who grows somewhat largely advised me last year to plant it among the early varieties. I did so, and got passable tubers to look at, but worthless to eat. As a

provement in recent years as in Carrots. Culture has so much to do with the good quality or otherwise of these useful and delicately flavoured roots that selections of the old forms have been well grown and sent out as new over and over again

under different names. I have for the last ten days been drawing excellent roots of Short Horn, and these are not a whit behind several new kinds planted next to it. I sow the Carrots in drills 9 inches apart, and between these sow a drill of Radishes, the latter coming away before the Carrots require all the room. To do them well, Carrots like a deep, but not over-rich tilth, and more frequent sowings than most other vegetables. An old and fully grown Carrot has never the same flavour as small, quickly grown roots, few roots being so sweet and tender as the latter. Large Carrots are, of course, useful for flavouring.—H.

Leeks in June.—

The Leek is very useful from October to the early part of May. After the latter date the plants show their seed-spikes and the flavour is lost. I think the good-keeping properties of the Leek may in some cases cause those who purchase roots at the season named to dislike this vegetable, as, though the lower portion of the plant looks well, being thick and well blanched, the inside is mostly composed of a hard seed-stem and is useless. The plants other than for seed are useless, and should not be used as a vegetable, but when the public see such fine roots at shows they think them excellent. It is impossible to prevent large roots seeding. Frequently these plants have been raised in heat some fifteen to eighteen months previous. From a quality point of view they are useless, and should not be recognised at shows, however large they may be.—S. H. B.

A good keeping Beetroot.—For many years I have grown

Dell's Crimson, not on account of its splendid colour, but for its keeping properties, as given cool storage from December to June there is no difficulty in having good roots at mid-summer. I am aware many growers object to this variety on account of its small size, but this in my opinion is an advantage, as coarse Beets



Spray of Japanese Cherry (Prunus pseudo-Cerasus fl. pl.). From a photograph by G. Champion. (See p. 5.)

second early or main-crop it is useful, as it is an immense cropper, seldom taking disease, the tubers large and of good quality later in the season. H. R.

Carrot Short Horn.—There are, I think, few vegetables in which there has been so little im-

neither keep well nor cook well. I notice at wioter exhibitions a much larger root under the name of Dell's, the foliage being much lighter and coarser. Soils and plenty of food may be the cause of increased size and colour. Too early sowing may also cause roots to be large, but I fear in some cases the stock is not the true Dell's. This variety is very distinct, owing to its intense bronzy foliage, deep crimson colour and small smooth root. For keeping I have not found its equal, sown in May or June in an open quarter and lifted as late as possible in the autumn.—G. WYTHES.

Tomato: Vegetable or fruit?—As we are generally agreed as to the Tomato being a fruit, there is but little in "A. D.'s" criticism (p. 402) which calls for a reply from me, but I should like to point out that the exhibits at the Temple show are in no way a test in the matter, for no restrictions as to the number or kind of exhibits are placed on exhibitors there; neither are the exhibits competitive in the ordinary sense, nor shown for money prizes. Can "A. D." induce any competitor in the fruit classes at the Royal Horticultural Society's Crystal Palace show to put up a dish of Tomatoes in the collections of fruit for competition? If so, and a full number of points are allowed for them, I shall be satisfied, and many exhibitors who are sometimes at a loss for a dish to complete their exhibits will be gratified at the opening given them. I am aware that the Royal Horticultural Society have in a half-hearted way admitted that Tomatoes may be sometimes shown as fruits, but these must be either small or shown in clusters, and the admission has been of no practical benefit to the exhibitor up to the present time. Why should a dessert Tomato be small, and what is smallness? We do not ask for small Peaches or small Grapes. Some moderately large Tomatoes are preferred to the small ones for eating raw. I still hold that up to the present the Tomato is not given its proper status as a fruit from an exhibitor's point of view.—J. C. TALLACK.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

JUNE 27.

It has become quite usual now for the Drill Hall to be filled with flowers at the fortnightly meetings, and on Tuesday last another large and beautiful display was to be seen. There were Orchids, indoor and hardy flowers, with a charming show of Roses, which were remarkably fresh and true in colour. It was in every way a delightful exhibition.

Orchid Committee.

First-class certificates were awarded to the following:—

ODONTOGLOSSUM HARRYANO CRISPUM.—This is the reverse cross of the variety exhibited at the Temple last year. It differs both in the colour and also in the shape of the segments, the lip especially being nearly twice the size. The sepals are creamy-white, slightly tinted rosy-violet, the whole surface mottled and marbled with light brown; the petals creamy white tipped with violet at the apex, mottled and blotched with light brown in the centre. The lip, upwards of an inch across, is pure white in front, spotted with deep purple around the sides. In front of the deep yellow disc there are numerous rich brown spots. The plant carried two racemes of three and four flowers respectively. From Sir F. Wigan, Clare Lawn, East Sheen.

LÆLIA DOMINIANA VAR. FIRE KING.—This is a beautiful form, the sepals and petals deep rose-purple, the lip rich crimson-purple veined with a darker shade and margined with rich rose-purple. The side lobes are rose-purple shading to yellow at the base, longitudinally lined with rich crimson through the throat. It is the result of crossing *L. purpurata* and *Cattleya Downiana*. From Mrs. Briggs-Bury, Bank House, Accrington.

LÆLIO-CATTLEYA EUDORA VAR. EXIMIA (*Cattleya Mendeli* × *Lælia purpurata*).—In this the sepals and petals are pale rose, the lip intensely rich crimson-purple, with a broad margin of light rose, the side lobes rich crimson, shading to yellow, with numerous brown lines through the base of the throat. This is by far the finest form of this hybrid we have seen. From Messrs. J. Veitch and Sons.

ODONTOGLOSSUM CRISPUM SERAPHIM.—This is one of the finest white varieties we have seen. The sepals and petals are white, except a faint colour in some of the lower flowers on the spike on the bottom sepals. The lip is pure white, except the bright yellow disc. The plant carried a ten-flowered raceme. From Mr. de B. Crawshay, Rosefield, Sevenoaks.

Awards of merit were adjudged to the following:—

MASDEVALLIA RUSHTONI (*M. ignea* Eicharti × *M. racemosa*).—The habit of growth and shape of the flowers resemble those of the parent species. The flowers are orange-scarlet, veined with a darker shade of colour. It is a fine addition to the *Masdevallia* hybrids. From Captain Hincks, Terrace House, Richmond, Yorks.

LÆLIA TENEBROSA VAR. VICTOR WARBURTON.—This is a distinct form, differing in the colour of the sepals and petals and also in the lip from the *Walton Grange* variety. The sepals and petals in Mr. Warburton's plant are rich bronzy yellow, the lip white, slightly tinted with rose. The side lobes in front have a broad band of reddish purple. The plant carried a two-flowered raceme. From Mr. A. Warburton, Vine House, Haslington.

CATTLEYA MOSSIE VAR. LAWRENCEÆ.—The sepals and petals are pure white, the lip white in front, suffused with a faint shade of lilac in front of the bright orange-yellow disc. The side lobes are white, shading to yellow towards the base. From Sir T. Lawrence.

CATTLEYA GASKELLIANA FORMOSA.—The sepals and petals are pale lilac-tinted, the lip almost white, with some veinings of rose-purple in the centre; the side lobes white, shading to light yellow through the base of the throat. The plant carried a three-flowered raceme. From Messrs J. Veitch and Sons.

ODONTOGLOSSUM CRISPUM PURPURASCENS.—This is a beautiful form of the *O. c.* *Starlight* section, the sepals white, heavily tinged with rose, the whole of the centre area covered with rich brown-purple spots. The petals are white, tinted with light rose and sparingly spotted with small brown spots; the lip white, shading to yellow on the disc and having some rich brown spots in the centre. The plant carried a ten-flowered raceme. From Sir T. Lawrence.

Messrs. J. Veitch and Sons sent a pretty group, consisting principally of fine varieties of *Cattleyas* and *Lælias*, both hybrids and species. In the back row were several good forms of *Lælia purpurata*, a finely-flowered plant and variety of *Cattleya Warneri*, several good forms of *C. Warscewiczii*, good varieties of *C. Mossie*, *C. M. Reineckiana*, and *C. M. Arnoldiana*. The most prominent among the hybrids were several forms of *Lælio-Cattleya Canhamiana*. *L.-C. albida* had almost white sepals and petals and a broad white fringed margin. *L.-C. Aphrodite Eudora* was well represented. The *cinnabar-yellow-petalled* *L.-C. Hippolyta* was most effective. Several finely-flowered plants of *Disa Veitchii* and *D. kewensis* were also included. *Cattleya Juliet* (*C. Mossie* × *C. labiata*), with deep rose sepals and petals, the broad open lip deep rose, veined and suffused with crimson-purple, was most attractive. A silver Banksian medal was awarded. Messrs. Hugh Low and Co. sent a large group, consisting principally of finely-flowered *Cattleyas* and *Lælias*. *Lælia Digbyana* and *L. purpurata* were most attractive. *Dendrobiums*, *Odontoglossums*, *Cypripediums*, *Oncidiums*, and *Masdevallias* were very prominent and well represented. Under a glass shade was a good plant with one flower of the rare *Cypripedium callosum Sanderæ*. A silver Banksian medal was awarded. Messrs.

B. S. Williams and Son sent a nice group. In the back row were some finely-flowered *Oncidium serratum* and *O. macranthum*, a good plant of *Vanda tricolor*, and two finely-flowered plants of *Thunia alba*. *Lælia purpurata* and *L. tenebrosa* were also included. *Cattleya Mendeli* and *C. Mossie* were well represented. *Aerides Lobbi* and *A. affine* were also noticeable. A good plant of *Utricularia montana*, several finely-flowered *Cypripediums*, *Epidendrums*, and *Odontoglossums* were well represented (bronze Banksian medal). Messrs. Stanley, Mobbs and Ashton sent a large group, consisting of finely-flowered *Cattleyas*, *Lælias*, *Odontoglossums*, *Oncidiums*, and *Cypripediums*. A bronze Banksian medal was awarded. Messrs. J. Charlesworth and Co. sent a *Cattleya Wagneri* with seventeen flowers, a pale form of *C. Mendeli*, and *Lælia cinnabrosa*.

Mr. J. Bradshaw, The Grange, Southgate, was awarded a silver Banksian medal for a nice group, consisting principally of good forms of *Odontoglossum crispum* and a pretty form of *O. excellens*. Among the many fine *Cattleyas* was a plant of the now scarce *Lælio-Cattleya exoniensis* with two spikes of flower. *L.-C. Thorntonii* has the intermediate character of the parents, the sepals and petals delicate lilac, the lip bright rose on the fringe, creamy white in the centre and yellow through the throat. *Anguloa Clowesi* and other interesting species were also included. Lt.-Col. Shipway, Caiswick, sent a small group. The most prominent among these were a dark form of *Lælia purpurata* and a good variety of *Cattleya Mendeli*. *C. Mossie*, *Odontoglossums* and *Cypripediums* were also represented. Lord Burton sent fine forms of *Cattleya Mendeli* and *C. Warneri*. Mr. W. P. Burkenshaw showed a spotted *Odontoglossum crispum*. Mrs. Briggs-Bury sent *Lælia tenebrosa* (*Walton Grange* variety), and Mr. W. A. Bilney an exceptionally dark form of *Cattleya Gaskelliana* and *L.-C. Canhamiana alba*. Mrs. Temple, Layswood, Groombridge, had a dark form of *Coccyzyne Dayana*. Baron Schroeder sent a three-flowered raceme of the lovely *Cypripedium Stonei platyanthum*, and Sir F. Wigan a dark form of *Cattleya Mossie* and a good variety of *Lælio-Cattleya eximia* with two flowers. Sir T. Lawrence had a dark form of *Lælia purpurata*, and Mr. de B. Crawshay a good shaped *O. crispum* with an eleven-flowered raceme. Mr. R. I. Measures sent *Masdevallia angulata*, a distinct variety of the *M. Mooreana* section, and Mr. W. C. Walker showed a finely-flowered plant of *Burlingtonia fragrans*.

Floral Committee.

First-class certificates were awarded to—

DAVALLIA ILLUSTRIS.—This plant seems to bear a relationship to *D. Mooreana*, though both in colour and height it is distinct from this. The plant is 2½ feet high, of spreading habit. From Messrs. Jas. Veitch and Sons, King's Road, Chelsea.

DRACÆNA INDIVISA SCHNEIDERI.—A well-marked form of this plant, being compact and free in its leafage. The leaves are each nearly 2 feet long, slightly channelled on the upper surface, and heavily saturated with reddish crimson at the base. From Messrs. Veitch and Sons, Chelsea.

Awards of merit were given to—

PELARGONIUM FIRE DRAGON.—A curious novelty in which the petals, which are brilliant scarlet, have a distinctly reflexed appearance and quite blunt at the tips. From Mr. E. S. Towell, Hampton Hill.

CARNATION LADY GERARD (Malmaison).—A distinct primrose and white, the flowers full and of the same form as is usual in this type. From Mr. H. Walters, Eastwell Gardens, Ashford, Kent.

DELPHINIUM SIR WALTER SCOTT.—A fine kind with massive spikes of intense violet-purple flowers. From Messrs. Kelway and Sons, Langport.

CARNATION TRUMAN.—A finely-formed pure white flower, very full and freely produced, though, unfortunately, without perfume. From Mr. James Douglas, Edenside, Great Bookham.

Messrs. Paul and Son, Waltham Cross, Herts, set up a fine bank of Roses, in which some three dozen Moss varieties figured, Zenobia, Blanche Moreau, Crested, Comtesse de Murinus (fine bluish-white), and the old common Moss being the best. Cluster Roses of the Polyantha section were likewise numerous, and very showy were the rugosa forms, Mme. G. Bruant and Blanche double de Courbet being very good. The Hybrid Tea Belle Siebrecht was in fine form. Among pot kinds, Triomphe de Caen and Chas. Lefebvre, both excellent dark sorts, were noticeable, and equally so the now well-known Enchantress (silver Flora medal). Our reporter had not moved from this group when from unforeseen causes, though presumably inadequate staging, the stage carrying the above collapsed with all that was upon it. Messrs. J. Peel and Sons, Roupell Park Nursery, West Norwood, had set up a lovely bank of single and double Begonias, but, owing to the above accident, the entire staging collapsed just as our reporter was commencing his notes. It was, however, obvious that the plants and strain were of the best description, well grown and freely flowered, and but for the accident referred to would have made a notable feature in the day's exhibition. A very fine bank of Malmaison Carnations with a background of tall Bamboos came from Messrs. Wm. Cutbush and Sons, Highgate. The plants were models of good culture. Some of the best were Souvenir de Chas. Freemantle, red; Jane Seymour, pink; Albion, salmon-pink; Soult, red-scarlet; Princess of Wales, Calypso, deep blush and pink; Margot, red; and the clear scarlet Sundridge, the latter of the border class. A capital lot of the Golden Calla (*Richardia Elliottiana*) occurred at intervals in the group, which was bordered with Ferns (silver Banksian medal). Mr. John Russell, Richmond Nurseries, Richmond, had a fine group of ornamental trees and shrubs in pots, in which *Acer*s, *Cotoneasters*, *Ivies*, *Catalpa springifolia aurea*, *Catalpa purpurea*, a very distinct plant; Golden Oak, and such things largely predominated. A few good things were *Rhus glabra laciniata*, *Aralia Maximowiczii*, a handsome plant with digitate leaves, *Andromeda speciosa*, full of its snowy blossoms, *Andromeda pulverulenta*, and *Rhus japonica* Osbecki. *Robinia hispida* was also freely employed. *Euonymus* and small things formed the margin (bronze Banksian medal). Messrs. B. S. Williams and Son, Holloway, set up a small group of border Carnations, in which were yellow, scarlet, rose and pink shades. The plants were all in small pots, thus demonstrating what can be done in an ordinary greenhouse. The Messrs. Veitch and Sons, Ltd., Chelsea, had a fine display of their pink Canterbury Bells (*Campanula Media calycanthema rosea plena*), the plants models of good culture, excellent in habit and freely flowered. Some of the flowers were of great size and very rich in colour. The same firm also had an enormous group of cat herbaceous Peony blooms in which it was difficult to find a weak flower. Of the semi-doubles, Abotis, white with numerous white ligaments in centre, and Lachesis, pink guard petals, white twisted petals in centre, were very charming. Among the doubles, Zephyrus, blush-pink; Leonie, pale pink, very full; Aurora, pink and rose; General McMahon, rich purple; Vesta, full pink; Duchesse de Nemours, pure white, and Rubens, crimson-lake, were the best. At one end a pretty group was made of the early-flowering Gladioli and English Irises (the former in some dozen or more kinds), Delicatus, Rosy Gem, and General Scott being very fine. The well-marked G. insignis was also shown. *Ixias* in variety bedded in Maiden-hair Fern completed this imposing array of flowers (silver Flora medal). Messrs. Watkins and Simpson, Exeter Street, Strand, staged a group of their strain of dwarf bedding Lantanas. Mr. F. G. Foster, Brockhampton Nurseries, Havant, set up a wonderful array of Sweet Peas. Of the whites, Emily Henderson, Snowdrift and Blanche Burpee; of blues and kindred shades, Emily Eckford, Lady Hamilton, Countess of

Radnor; of pink and red, Gorgeous, Oriental, Lady Mary Currie; of primrose, Mrs. Eckford and Cream of Brockhampton, were the most important. Navy Blue is very fine, while Pink Friar is white, splashed pink. There were some eighty varieties set up in this group (bronze Flora medal). Hardy flowers from Mr. Maurice Prichard, Christchurch, Hants, though not so numerous as on a former occasion, contained some choice things, such as *Orchis foliosa*, *Philadelphus Lemoinei erectus*, *Kniphofia caulescens*, *Clematis integrifolia Darandi*, *Lilium umbellatum* Cloth of Gold, *Lilium Martagon album*, a dozen spikes, very fine; *Brodiaea coccinea*, a grand lot, and *Calochortus venustus citrinus*, the two latter showing how well such things do in the south. Mr. Prichard also had a series of M. Marliac's hybrid Water Lilies arranged in large bowls, the flowers very fine and fresh (silver Banksian medal). Messrs. Wallace and Co., Colchester, had a large and varied group of the best hardy flowers. These for the most part were set up in large blocks that at once created a good effect and likewise gave a good idea of their worth. In this way we saw a great variety of *Lilium Thunbergianum*, or elegans as the group is sometimes called, two of the finest being Alice Wilson, with delightful yellow flowers, and Orange Queen, a kind with clear rich orange flowers, remarkable not only for colour, but equally for its substantial petals and their well-rounded form. Other kinds of this set also were numerous. Then came L. Browni, L. Washingtonianum, L. Szovitzianum, L. Henryi, and L. Hansonii. The charming hybrids L. Dalhousii and L. Marhan were also noted. Not least of the many kinds here was L. platyphyllum with towering spikes of its massive flowers away in the background. Other notable things in this group included a choice array of *Ixias*. *Calochortus* were naturally plentiful, though largely of the Eldorado group and the ever-welcome *C. citrinus* among others. Some of the loveliest of summer *Irises*, such as *I. juncea*, *I. Monnierii*, *I. gigantea*, and *I. spuria*, were also here, and many different forms of *Brodiaea*, among which *B. coccinea* is ever a conspicuous flower. Spikes of *Incarvillea Delavayi* nearly 2 feet long gave evidence of being quite happy. Tree Peonies were also largely represented. The Messrs. Barr and Sons, Covent Garden, also brought a fine group of things, though here the herbaceous Peony was largely in evidence. Of these, however, there was a large display, embracing the finest of the section, some of the lighter shades being very pleasing and fragrant also. A few flowers of *Iris Kämpferi*, probably the earliest of this set to bloom this year, were also noted, besides which such things as *Inulas*, *Crocus*, *Polemonium coerulum album*, *Potentilla* in variety, *Lupinus arboreus*, *Cypripedium spectabile*, and such things were also shown. Some three distinct *Heucheras* gave a very pretty result in near proximity, the richly-coloured *H. splendens* being a very striking lot (silver Banksian medal). Messrs. Dobbie and Co., Rothesay, N.B., had an imposing array of Sweet Peas set up in huge bunches and to the number of about 100. The cream of this beautiful family was included in this comprehensive group. The varieties, however, are well known, and we therefore refrain from giving them in detail (bronze Flora medal). Mr. Joseph Lamb, Burton Joyce, Notts, exhibited a basket of blooms of the Carnation-flowered Pink Albino, perhaps the nearest approach to a Carnation of all the Pink family. It is a pure white flower and deliciously fragrant. Mr. James Douglas, Edenside, Great Bookham, set up a few good Carnations, mostly of the border sorts. Lady Grimston of the Malmaison set is distinct, with rose-scarlet spots on a pink and white ground. Other good border kinds included Cardinal Wolsey, Frances Wellesley, carmine-rose self, quite a novel shade among red Carnations; Mrs. Colby Sharpin, Trojan, pure white; Cecilia, fine yellow; and Mrs. Sydney H. Divers, scarlet. A capital lot of mixed hardy flowers from Messrs. Geo. Jackman and Sons, Woking, contained some good things,

such as *Geum miniatum*, *Delphinium Balladonna*, *Inula glandulosa*, *Campanula grandis*, (*Esothera speciosa*, together with a variety of Pinks, such as Anne Boleyn, Emerald, white, dark centre, Mrs. Pettifer, and others. *Lupinus arboreus* was also good, while the hybrid *coccinea Clematis* and hybrid Sweet Briers proved most interesting. Some good Roses were also shown, Fisher Holmes and the lovely Tea Sunset, Kaiserin Augusta Victoria, Mrs. Sharman Crawford, Margaret Dickson, and Mrs. Grant being notable flowers (bronze Flora medal). The Stocks and hybrid Columbines from Messrs. H. Cannell and Sons, Swanley, were very pretty in the mass. It was an unusual bank of blossom, both families being represented by much variety and good colour. The Stocks were of an excellent strain and the colours well defined (bronze Flora medal). A large bank of herbaceous Peonies with *Delphiniums* was set up by Messrs. Paul and Son, The Old Nurseries, Cheshunt (bronze Banksian medal). Peonies and *Delphiniums*, too, were quite a feature in the large display from Langport by the Messrs. Kelway and Son. Here, however, some novelty presented itself, more particularly among the Larkspurs, though even these appear to have reached the very acme of perfection so far as size and colours are concerned. The most noticeable of these, however, are Miss Gladys Wilson, a fine double blue; Beauty of Langport, white; Primrose, a rather good spike; Lady Battersea and Norah Green, fine blue with pure white eye. Some good Peonies are Queen Victoria, pink and white; Olivia, white; Breeda, white and blush. The new *Lupinus polyphyllus* Somerset with soft and pale yellow flowers showed this to be a distinct addition to the hardy plant class. *Gaillardias*, too, were very fine (silver Banksian medal). A collection of *Selaginellas*, containing some fifty species and varieties, from Mr. H. B. May, Elmdon, was thoroughly representative of this pretty and useful group of plants, the fresh green tints from these forming a refreshing group (silver Banksian medal).

A grand lot of flowering and decorative plants was arranged on the floor by Mr. E. Backett, gardener to Lord Aldenham, Elstree, and was greatly admired. The group was apparently arranged from diverging centres of Palms, Kentias and *Areca lutescens* being employed for this purpose. These primary plants were splendid examples of their kind, well grown and finely furnished. Around these a considerable variety of *Liliums*, such as *longiflorum*, *tigrinum*, *Kretzeri* and others, was used, while *Dracaenas*, *Crotons*, splendidly coloured pieces and finely grown, *Begonias* of the Rex or allied set, *Aralias*, *Tuberoses*, *Ericas*, *Crassula coccinea*, *Saxifraga pyramidalis*, a few *Orchids*, *Rose Crim* and *Rambler* and such things filled up the intervening spaces. This group well deserved the silver-gilt Flora medal awarded it. A most charming group, probably one of the finest ever seen at the Drill Hall, was composed simply of *Crotons* and *Humeas*, which alone conveys but little to those removed by distance from the place of exhibition. The *Humeas* were giants of their kind, fine plants towering away to 12 feet and 15 feet high, perfect examples of cultural skill, to say nothing of the care and judgment in bringing such fine plants a long distance by road. The lovely and fragrant plumes constituted a screen of indescribable elegance, and contrasted finely with the rich colour of the well-grown *Crotons* below. The group was margined with *Caladium argyrites* and extended to some 30 feet in length. These lovely plants came from the gardens of Sir C. Pigott, Wrexham Park, Slough (Mr. J. Fleming, gardener), and worthily gained a silver-gilt Banksian medal.

Fruit Committee.

The premier exhibit came from Messrs. Rivers and Son, Sawbridgeworth. The Peach trees in pots were remarkable specimens of culture, carrying from fifteen to eighteen fruits of enormous size and splendid colour. The varieties were Sea Eagle and the less known Thomas Rivers, a

splendid fruit and much admired for shape, size, and colour. There were also gathered fruits of this variety. It is evidently a splendid variety for forcing. The trees of Sea Eagle had been forced yearly for eight years. Princess of Wales Peach, Grosse Mignonne, and Gladstone were also very fine. Victoria and Byron Nectarines were very fine fruits, as were the Cherries Frogmore Bizarre, Elton, and Early Rivers, and The Czar Plum (silver-gilt Knightian medal). A very fine collection of Queen Pines was sent by Mr. Thos. Coomber, The Haudra Gardens, near Monmouth. The fruits were large and well grown, with small crowns and large, well-ripened pips, beautifully coloured, and well meriting the silver Knightian medal awarded. A small collection of fruit was sent by Mr. W. J. Prewett, The Gardens, Frensham Place, Farnham, Surrey, including very good Foster's Seedling and Black Hamburgh Grapes, Peach Hale's Early, Early Rivers Nectarine, Royal Jubilee Melon, a nice fruit, and excellent Royal Sovereign Strawberries (silver Banksian medal). Messrs. Laxton Bros., Bedford, sent some fine fruits of Monarch and Mentmore Strawberries, the former remarkable for size and colour. Messrs. Veitch, Ltd., Royal Exotic Nursery, Chelsea, sent Veitch's Prolific Strawberry, a new variety, given a certificate last year. Fruiting plants laden with fruit were also sent. This evidently is a reliable setter, as Strawberries this year in the London districts are none too plentiful, owing to late spring frosts. Melons came from various sources, the best being Gunton Scarlet, from Mr. W. Allan, Gunton Park Gardens, Norwich. To this the committee unanimously gave an award of merit, but after the committee had left it was discovered the same Melon received a similar award last year. This was not stated. Of course the award was not in order, as a first-class certificate was the only award available. Doubtless this would have been given had it been discovered in time. Mr. W. R. Pettigrew, Hewell Grange Gardens, near Bromsgrove, sent two Melons of good quality. One, the result of crossing Read's Scarlet and Blenheim Orange, was a good fruit, but not ripe, and the committee asked to see it again in better condition. The other was the result of crossing Golden Perfection with High Cross Hybrid, but inferior in quality to the first-named. A new Cucumber was shown by Mr. T. Haynes, Carlton Gardens, R.S.O., Yorks, but too large and old for the committee to test quality. A new Tomato named Klondyke came from Mr. M. Taylor, The Gardens, Penbedw, Nannerch, N. Wales, the result of crossing Ham Green and Early Ruby. In appearance the fruits were not unlike Ham Green, evidently not superior. The committee decided to give it a trial at Chiswick to test its cropping qualities. Other vegetables were sent, but of no value whatever either as regards quality or appearance.

Rose Show.

In the open class for twenty-four single trusses, distinct, Mr. B. R. Cant, Colchester, came first with good blooms throughout, his Prince Arthur, Maman Cochet, Marchioness of Downshire, Helen Keller, Mrs. John Laing, Sultan of Zanzibar and Catherine Mermet being excellent. The second prize was awarded to Messrs. D. Prior and Sons, also of Colchester, some of the best blooms here being Mrs. Sharman Crawford, Mrs. Grant, The Bride, Caroline Testout and Prince Arthur, Messrs. F. Cant, Colchester, securing third prize in a good competition. For eighteen single trusses (amateurs), Mr. O. G. Orpen, West Bergholt, Colchester, was first, Maman Cochet, Rainbow, Souv. d'Elise Vardon, and Mrs. Grant being some of the best. Mr. T. B. Haywood, Reigate, who was second, had Mrs. Grant, Abel Carriere, Marchioness of Downshire, A. K. Williams and Grand Mogul, the two latter being in fine colour, Mr. E. M. Bethune, Donne Park, Horsham, taking third place. For eighteen single trusses, distinct (open), Mr. Chas. Turner, Slough, took the leading place, having some of the best blooms in the show. His Francois Michelin was grand. Good also were Her

Majesty, Caroline Testout, Mrs. J. Laing, Prince Arthur and Xavier Olibo. Messrs. J. Burrell and Co., Cambridge, were second, having very fine Marquise Litté, Duke of Teck, Bridesmaid, and Prince Camille de Rohan, Messrs. G. Cooling and Sons, Bath, taking third place. For twelve single trusses (amateurs), Mr. G. W. Cook, The Briars, North Finchley, was first, his best being Medea, Captain Hayward, Mrs. Grant, and Louis van Houtte. Mr. W. Kingston, Grey Street, Bedford, had Catherine Mermet and Princess of Wales very good, Mr. R. W. Bowyer, Haileybury College, Heits, being third. Six single trusses (amateurs) brought Mr. B. H. Langton, Raymead, Hendon, to the front, and here we noted Captain Hayward, Charlotte Guillemot, Mrs. Grant, and Gustave Pigean, all good and superbly finished flowers—indeed, among the freshest and cleanest of the entire exhibition—Mr. J. Biteman, Archway Road, N., being second. For nine single trusses of any one variety of H.P., H.T., or H.B. (amateurs), the first prize was taken by Mr. Percy Burmand, Hill Range, Reigate, Mrs. Grant being the variety. The second place was occupied by Mr. T. B. Haywood, who had Mrs. J. Laing very good, Rev. R. F. Page Roberts, Rectory, Seale, coming third with Mme. Gabriel Lutzet. For six trusses in the three sections named above, Mr. G. W. Cook, North Finchley, took the lead with Mrs. Grant, Mr. E. M. Bethune being second with Kaiserin Augusta Victoria. For eighteen trusses in not less than twelve kinds, Rev. R. F. Page Roberts came first, M. Cusin, Maréchal Niel, Maman Cochet, Niphotos, and Golden Gate were the best, Mr. O. G. Orpen, who had very fine Amazon, deep golden yellow, and Anna Olivier in his lot, being second. For eighteen single trusses (open), Messrs. D. Prior and Sons, Colchester, took first, Mme. de Watteville, Souvenir d'Elise, Rubens and Maman Cochet being good flowers. In this class there appeared to be only one prize awarded, yet there were some four competitors. For twelve single trusses, not less than nine varieties (amateurs), Mr. Conway Jones, Blenheim House, Hugglescote, was first, Mme. de Watteville, Niphotos, Ethel Brownlow, The Bride and Golden Gate being best. Rev. A. Foster-Melliar had good Catherine Mermet, Maman Cochet and Cleopatra. For six single trusses, not less than four varieties, Rev. F. R. Burnside, St. Margaret's Bay, Dover, took leading place, having Mme. Hoste, Medea and Mme. de Watteville, Mr. H. P. Langdon being second with good Maman Cochet and Souvenir d'un Ami. For nine single trusses of any one variety, Mr. O. G. Orpen secured first place with finely coloured Maréchal Niel, the following class being for six single trusses, and here Mr. H. P. Langdon, Shenfield, was first with charming blooms of Anna Olivier, Miss B. H. Langton, Raymead, Hendon, coming second with good flowers of Hon. Edith Gifford. For thirty-six distinct varieties of garden Roses, Messrs. G. Cooling and Sons, Bath, easily took leading place with a splendid display of fresh-looking blooms. It is a pleasure at any time to see so fine a lot of these free-flowering kinds, of which a few are given: Alistair Stella Gray, very charming; Camoens, bright rose; Mme. Eugène Resal, rose, shaded orange; Rosa Mundi, Dr. Grill, Mme. Falcot, Souv. de Catherine Guillot, the pure white Thalia, Ma Capucine, Marquis of Salisbury, crimson and semi-double; Cooling's yellow Noisette, Homère, the single white Himalayan, Cooling's single Crimson Bedder, Dr. Rouges, deep red and orange, &c., &c. Messrs. Paul and Son, Old Nurseries, Cheshunt, were second, their best being Royal Scarlet, l'Idéal, Polyantha grandiflora, white; Carmine Pillar, W. A. Richardson, Una, a charming white; Blanche Moreau, and rugosa in variety. A similar class for eighteen varieties for amateurs followed, Mr. Alfred Tate, Downside, Leatherhead, being first with Hebe's Lip, Rosa Mundi, Marquis of Salisbury, Crimson Rambler, Safrano, Réve d'Or, &c.; Mr. F. W. Camp, Colley Manor, Reigate, and the Rev. J. H. Pemberton, Havering, Essex, taking second and third prizes respectively.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE Earl of Derby presided over the sixtieth anniversary festival dinner of the Gardeners' Royal Benevolent Institution, at the Hotel Metropole, on Wednesday evening. A large company assembled, and among those present were Sir J. Whittaker Ellis, Messrs. Harry J. Veitch, James H. Veitch, Arthur Turner, Harry Turner, J. Hudson, J. James, G. Wythes, Rudolph Barr, H. Cutbush, J. H. Laing, W. Baker, J. G. Veitch, B. Wynne, G. Munro, and W. Poupard and Lieut.-Col. Pilkington, M.P.

The chairman, in proposing the toast of "Continued Success to the Gardeners' Royal Benevolent Institution," disclaimed practical knowledge of gardening, but gave some amusing instances of attempts made by him when in the army to establish gardens at different stations. These attempts were not regarded favourably by the authorities, and led to the despatch of huge folio sheets of inquiry as to the authority by which such attempts had been made. It was rather late in life that he was brought into contact with practical gardening, and he could tell them that although Lancashire did not enjoy a climate favourable to vegetation, he knew no people who had more genuine love for flowers than the Lancashire people. But even those who had no practical acquaintance with the art shared the feeling of sympathy with those who, from misfortune, or illness, or other causes, had fallen back in the race of life, and to whom this institution stepped in as a ministering angel, making life easy, and in many cases prolonging it. At the present time there were 174 recipients of annuities. Of these, 4 were over ninety years of age, 36 over eighty, and 87 were over seventy, and these persons who had passed the allotted span of man were helped by the institution and relieved from that anxiety which wore more men to their tomb than did illness. The annual amount of the annuity was £20 for men and £16 for women, and the institution further inculcated the principle of self-help, giving what was practically a bonus or credit in votes to those who had for a certain period subscribed to its funds. Those who subscribed to the institution could be sure that the funds were devoted to deserving recipients of the bounty, while the office expenses were on almost an exiguous scale, the able secretary, Mr. G. Ingram, having a staff of only one. He appealed for subscriptions even from those who could give but small sums, and spoke also of the claims of the fund commemorating the Jubilee, which was used to aid candidates who had not yet succeeded in obtaining pensions. A sympathetic letter from the Dean of Rochester, who quoted an instance within his own knowledge of the great good done by the institution, was read by Mr. Ingram, and the chairman then formally proposed the toast, coupling with it the name of Mr. Harry J. Veitch, treasurer.

Mr. Veitch, in his reply, said that the work was progressing satisfactorily; more good work had been done in the past year than in any previous year, and the warmest thanks of the committee and of the friends of the institution were due to Mr. Ingram. He mentioned that of the 174 pensioners one was a woman whose husband was elected as far back as 1863 and died in 1881; his widow succeeded him, and thus the two had been on the pension list for thirty-six years. The husband had subscribed a guinea for eighteen years, and together up to the present the two pensioners had received £568. The amount required for paying pensions alone was £3200 per annum, and in addition they had to meet the expenses of management, which amounted to between £600 and £700. The income from investments was about £900, so that apart from the subscriptions about £2000 was required from donations. In addition, they wished assistance in the formation of a Samaritan fund, which was to be invested, and the interest devoted to helping candidates who were known to be deserving, but

had not from various causes been subscribers. The sum of £2000 would enable them to do what was required. Sir J. Whittaker Ellis proposed "Horticulture in all its Branches," and Mr. Wm. Atkinson, of Sheffield, responded. Mr. W. A. Bilney proposed "Our Country Friends," and Mr. R. Piper, whose name was associated with the toast, in replying insisted that the subscriptions of those who joined the institution simply with a view to future benefits were not wanted. Let those able to subscribe cast their bread upon the waters, and if in after years they were in need they would find it return to them. Mr. Ingram, in announcing the subscriptions promised, stated that the Victoria fund was now complete. Inclusive of 200 guineas from the chairman, the contributions as the result of the festival amounted to £2500. Mr. N. N. Sherwood proposed "The Chairman," and Lord Derby, in responding, accepted the position of vice-president of the institution.

An admirable programme of music was performed under the direction of Mr. Herbert Schartau. The tables were profusely decorated with choice flowers and the whole of the arrangements were admirably carried out by Mr. Ingram.

OBITUARY.

MR. T. W. GIRDLESTONE.

ON Sunday last, after a brief illness, there passed away in the prime of life one of the keenest amateur horticulturists this generation has known. I need scarcely say I refer to the late Mr. T. W. Girdlestone. Notwithstanding the many arduous and anxious duties involved in the management of a large school and a naturally rather frail constitution, his interest in floriculture never flagged; indeed, it was while superintending the planting of his unrivalled collection of single Dahlias only a few weeks ago that he was seized with an attack of illness which ultimately proved fatal.

At one period of his life the Rose almost exclusively engaged his attention, and at that time it may truly be said that no other amateur rosarian possessed such an extensive knowledge of Roses generally, especially of the decorative and single varieties, as was clearly evidenced by the admirable articles which in those days appeared week by week in the pages of *THE GARDEN*. For several years in succession he came in third in the amateur champion class at the National Rose Society's Crystal Palace exhibition, and had circumstances allowed, must sooner or later have risen to the premier position, although greatly handicapped by the light character of the soil in his garden, so skilfully were his Roses grown and staged. As is now well known, but for its re-introduction by Mr. Girdlestone, one of our finest exhibition Roses, Suzanne Marie Rodocanachi, would have been altogether overlooked and lost to cultivation. He next turned his thoughts to Dahlias, as coming into flower at a period when he had a little more spare time, and especially to the single Dahlia, of which at his death he certainly possessed the finest strain in the world. Not only were his flowers in this section unapproachable at an exhibition, but his method of staging them was also the envy of all competitors. For many years past Mr. Girdlestone has undoubtedly been the mainstay of the National Dahlia Society, first as secretary and treasurer, and more recently as its president. His far-seeing judgment proved on several occasions of inestimable service to the society as well as to the Dahlia itself. Never more was this the case than when, some years ago, he so firmly impressed upon the committee, when wavering between the Cactus and so-called decorative varieties, to decide once for all in favour of the former, and to issue each year lists of the best Cactus kinds until they had reached such a degree of perfection, that this section might be left to stand alone upon its own distinctive merits.

Anyone who has seen Mr. Girdlestone's lovely garden at Sunningdale and the admirable taste displayed in its arrangement will know that it was not only as a rosarian and Dahlia specialist that he might have shone in horticulture. To say nothing of landscape gardening, his knowledge of alpine and herbaceous plants was almost as extensive.

I feel that I have not written in any way extravagantly of one with whom it has been my privilege to be intimately acquainted for nearly twenty years both as a friend and brother horticulturist, for I cannot but think, considering all that Mr. Girdlestone managed to accomplish in such a comparatively short space of time, and when thronged with so many other pressing duties, how much greater things he would have been able to do had only his life been spared and more leisure fallen to his lot. His chief characteristics outside his many social and winning gifts were, I should say, his singular independence and originality of thought and action combined with an exquisitely refined sense both of form and colour. Few men, I should imagine, with such slender opportunities of meeting his fellow horticulturists have ever made themselves so generally respected and beloved as the subject of this brief and imperfect tribute to his memory.

Berkhamsted.

E. M.

James Anderson.—It is with regret that we have to record the death of Mr. James Anderson, who passed away at Glasgow on June 16, in his sixty-eighth year, after a protracted illness. The deceased was for many years gardener to Mr. T. Dawson, Meadowbank, Uddingstone, N.B. Mr. Anderson was for some time editor of the *Northern Gardener*.

PUBLIC GARDENS.

Proposed extension of Brockwell Park.—At the meeting of the Lambeth Vestry on Thursday evening, Mr. J. A. J. Woodward in the chair, it was unanimously resolved, on the motion of Alderman Hubbard, seconded by Mr. Harris, to urge the London County Council to acquire a piece of land adjoining Brockwell Park, Herne Hill, for the purpose of enlarging the park. Mr. Hubbard said he understood that the strip of land in question, which is beautifully wooded, was about to be developed for building purposes, and reminded the vestry that at the opening of the park Lord Rosebery said it would be a thousand pities if this land should ever be covered with houses.

The Paragon open space.—The open space known as the Paragon, in the New Kent Road, which has been acquired by the Vestry of the parish of St. George the Martyr, Southwark, from Lord Llangatock, as well as a smaller space on the opposite side of the way, leased from St. Bartholomew's Hospital, was formally opened yesterday by Lady Llangatock in the presence of a large gathering. The space has been acquired at a cost of £3400, towards which Lord Llangatock has given £1000, the L.C.C. £1700, the Vestry of St. George £600, and St. Mary's Vestry £100. Part of the expenses of preparing the ground and laying it out has been borne by the vestry and the remainder by the Metropolitan Public Gardens Association. The size of the larger space is 4000 square yards, and of the smaller 525 square yards, and the larger includes a bandstand and several flower beds.

Dollis Hill Estate.—Lord Hobbhouse presided over a meeting held in the Guildhall, Westminster, on Friday evening last, to consider the purchase of the Dollis Hill Estate as a public recreation ground to be dedicated to the memory of Mr. Gladstone. Mr. Basil Holmes, secretary to the estate, stated that the London County Council had been approached by a deputation, and had promised to contribute £3000 towards the purchase of the estate on condition that the Willesden Urban District Council undertook to

keep it open to the public for ever as a recreation ground. The Gladstone National Memorial Committee regretted that it could not contribute to the purchase, as its funds were pledged for other objects. The total sum required by the trustees for the estate was £50,000. The Willesden Urban District Council contributed £30,000, the Middlesex County Council £12,500, Hampstead Vestry £1000, and Hendon District Council £500; and these contributions, with the London County Council contribution of £3000 and voluntary subscriptions of £494 18s., brought the total to £47,500, leaving £2500 still to be raised. It was resolved to approach owners of land abutting on the estate, asking them to contribute to the purchase in view of the fact that their property would be greatly increased in value. The Paddington Vestry is also to be asked to contribute. The Earl of Aberdeen wrote suggesting that if the owners of adjoining land saw fit to contribute, others would be more willing to co-operate in the scheme.

National Viola show.—The report of the Viola Society's show at Winchester House is unavoidably held over until our next issue.

The weather in West Herts.—A warm week. On one day, the 26th, the shade temperature rose to 82°, and during the preceding night the exposed thermometer did not fall lower than 55°, making this the warmest night as yet this year. At 1 foot deep the ground is but little warmer than is seasonable, but at 2 feet deep it is about 2° warmer than the average. A little rain fell on the 22nd and again on the 27th, but the amounts were altogether insignificant. In fact, no measurable quantity of rain-water has come through either of my percolation gauges for over three weeks.—E. M., Berkhamsted.

Water Lilies in America.—*Nymphaea odorata* Luciana and *N. Richardsoni* are now in bloom with us. *N. Richardsoni* is very fine for a white, and, although we have plenty of white kinds, *N. Gladstoniana* is indispensable. It is a larger flower than *N. Marliacea alba*, and without a shade of pink in the sepals, as in the latter variety. We wish very much you could see our Lilies in bloom. *Marliacea* varieties are fine with us, especially *N. Robinsoni*. We have most of his varieties except those of recent introduction. They are fine in colour, but they do not come up to our standard in size, but that will soon be met, as we have some very promising seedlings, amongst them being one that we have named after Mr. Wm. Falconer. This variety is much larger than *Marliacea N. ignea*, deeper and richer in colour, and as large as *N. alba*. Another variety is of a rich deep carmine, changing to wine-red, the arrangement of the stamens being also peculiar.—HENRY DREER, Philadelphia.

Names of plants.—*R. W. W.*—*Tellima parviflora*.—*Reginald Eger*.—*Epidendrum falcatum*.—*Walter Warton, jun.*—*Dendrobium moschatum* var. *Calceolaria*, differing from the type in its smaller and more highly coloured flowers.—*J. Meade*.—*Briza minor*.—*G. T. S.*—*Cyrtanthus McKeni*.—*W. Hatfield*.—Quite impossible to name from such a specimen.—*F. N. Garnett*.—*Polygonum amphibium*. We should think that constant cutting would get rid of it.—*F. F. F.*—1, *Geranium arvense*; 2, *Geranium striatum*; 3, *Escallonia macrantha*; 4, *Thalictrum anemoneoides*; 5, *Dianthus superbus*, form of; 6, *Lilium croceum*.—*Gardener*.—*Strax japonica*.—*J. D.*—1, send fresh specimen; 2, *Sidalcea candida*; 3, *Centranthus ruber*; 4, *Crepis aurea*; 5, *Veronica rupestris*; 6, *Thalictrum* sp.—*H. G. O.*—*Sisyrinchium striatum* var.—*Mrs. Johns*.—Common *Sanicle* (*Sanicula europaea*); native plant.—*W. D. R. D.*—Neither of the plants you send to name is cultivated, and therefore should be sent for names to some herbarium, such as Kew. The *Hieracium* is nearest to *H. prenanthoides*, and the *Veronica* is nearest to *V. austriaca pinnatifolia*. The *Iris* is *I. ochroleuca*.

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INDEX.

(Illustrations in Italics.)

Ferns:—	Gaillardia Langport 19	Torenia Fournieri 20	Kitchen:—	Asparagus Purple Argenteuil .. 26	Societies:—	National Rose show 29
Ferns, exotic, for the open air .. 14	Gillenia trifoliata 17	Tydeas 20		Beans, Broad 26	National Viola 30	
Ferns, Gold and Silver .. 13	Hemerocallis aurantiaca major .. 17			Beans, early Broad 25	Royal Gardeners' Orphan Fund .. 31	
Ferns, hardy non-British, in Yorkshire 13	Irises, Spanish 16	Orchids:—		Beans, early French 25	Royal Horticultural Society .. 31	
Ferns on tree stumps 13	Lilium rubellum 16	Aerides crassifolium 22		Beans, runner, as garden breaks .. 27		
Roses:—	Lily of the Valley in Norfolk .. 16	Aerides Warneri 21		Beet, early 26	Notes of the Week:—	
Brier, Sweet, Anne of Geierstein 14	Lupines, Tree 16	Brassia Keiliana 21		Broccoli Self-protecting .. 25	Campanula Burghaltii 31	
Rose, a fine pillar 15	Lupinus polyphyllus Somerset .. 19	Cattleya Aclandiae 20		Cabbages in November 26	Campanula persicifolia alba grandiflora 32	
Rose Bennett's Perpetual .. 15	Nymphaea flower, a proliferous .. 16	Celoglyne pandurata 22		Cardoons 27	Campanula pulla at Kaimies Lodge 32	
Rose Beryl 15	Peonies and Roses 17	Dendrobium superbum 21		Carrots, winter and spring .. 25	Columbines, hybrid 31	
Rose Cheshunt Hybrid .. 15	Pansy, Tufted, A. J. Rowberry .. 19	Epidendrum arachnoglossum .. 21		Celery, transplanting 26	Coronilla ibérica 32	
Rose Killarney 15	Pansy, Tufted, Miss Gertie Waterer .. 19	Leptandra nivalis 21		Cucumber Royal Osborne .. 27	Dautzia Lemoinei 32	
Rose Mme. Abel Chatenay .. 15	Pinks, propagating 19	Masdevallia Barheana 21		Lettuce Continuity 25	Fatsia japonica ripening seed .. 31	
Rose Mme. Rene Gerard .. 15	Pansy, Tufted, Ophelia 19	Masdevallia nycterina 22		Onion, winter, plots 27	Hallimodendron argenteum .. 32	
Rose Mme. Wagram 15	Plants, hardy, notes on 17	Odontoglossum polyanthum .. 22		Onions, feeding 27	Helopsis patula 31	
Rose Mrs. Frank Cant .. 15	Plants, showy rockwork and edging 16	Ocimum carthaginense 22		Peas, early 26	Humeas, finely-grown 32	
Rose Mrs. W. J. Grant .. 15	Polygonum baldschuanicum, propagating 17	Ocimum cucullatum 21		Peas Earliest Marrow and Chelsea Gem 27	Incarvillea Delavayi 32	
Rose Myrianthes renoucle .. 15	Pyrethrums, planting 15	Orchid roots 21		Potatoes 25	Ixia viridiflora 32	
Roses at the Temple show .. 14	Pyrethrums, top-dressing .. 13	Saccolabium ampullaceum .. 21		Potatoes, bad growth on .. 26	Ceanothus fruticosus Youngi .. 32	
Roses, Moss, common and gracilis 14	Sultan, the Sweet 16	Saccolabium Hendersenianum .. 21		Potatoes, forced 27	Oursia coccinea 31	
Roses, new or little-known, at the Crystal Palace .. 14	Water Lilies 18	Trichepilia tortilis 22		Shallots, lifting 27	Peas, Everlasting 31	
Roses, two brilliant bedding .. 14		Garden Flora:—		Spinach 26	Philadelphus microphyllus .. 32	
Roses, two miniature Moss .. 15		Incarvillea grandiflora 22		Tomato houses, early, constructing and heating .. 25	Poppies, the Oriental 32	
Flower:—		Park and Woodland:—		Tomatoes, feeding 26	Pyrus coronaria fl.-pl. 31	
Acantholimon glumaceum .. 17	Acalypha Sanderiana 20	Firs, the Corsican and Austrian 23		Turnips 26	Rose Gustave Regis 31	
Acantholimon glumaceum .. 17	Arums, summer treatment of Carnations 20	Forestry question, the 24		Orchard and Fruit:—	Silene alpestris 31	
Campanula, Peach-leaved .. 19	Hydrangea Hortensia in a pot .. 19	Horse Chestnut, the 23		Gooseberry caterpillar, the .. 28	Strawberry crop, the 31	
Erigeron glaucus 17	Hydrangeas in pots 19	Horse Chestnut, the 23		Melon William Tillery 28	Tropaeolum Leichtlini 31	
Flowers in the rock garden, Kew 18	Ipomaea Leari 20			Nectarine Cardinal 28	Yorkshire, notes from 32	
Flowers, outdoor, for cutting .. 18	Pelargonium Mr. W. Reaiby .. 20	Week's Work:—		Nectarines, new 28	Miscellaneous:—	
	Pelargoniums, regal, shadig Ragged Robin, the double, in pots 20	Fruits, hardy, work among .. 24		Strawberry President 28	Bonquets, making 32	
		Kitchen garden, work in the .. 24		Strawberry Royal Sovereign .. 28	Weather in W. Herts 31	

FERNS.

FERNS ON TREE STUMPS.

THIS method has much to recommend it. It is, however, necessary to select only Ferns with spreading rhizomes, most of which never root deeply into the soil. Young free-growing plants should be selected for the purpose. Where large quantities are grown or where the space is not limited, each stem may be confined to one species or variety, but this is not always convenient, in which case several varieties may be grown on the same stem, care being taken to select those most suitable for growing together, and to so dispose them that the larger-growing sorts have the most roomy positions and also that they do not overrun the smaller kinds.

Taking the Davallias, at least six sorts could be grown on the same stem, the sorts most suitable being *D. dissecta*, *D. dissecta elegans*, *D. Tyermanni*, *D. Mariesi*, *D. Griffithiana*, and *D. decora*. Those of the *fijensis* type may also be used, but the rhizomes do not spread so freely. Of the *Platyceriums*, which are the most suitable of all Ferns for the purpose, the three best are *alcicorne*, *æthiopicum* (*Stemaria*), and *Willincki*. As the fronds of the last hang down a considerable length, it should have the most elevated position. I might add *Hilli* to the list. This has almost circular basal fronds (or sheaths) and the fertile fronds grow erect, forming a nice contrast to the erect shell-like basal and long drooping fertile fronds of *Willincki*. All of these *Platyceriums* produce young plants on the roots, and after the plants are well established on the tree-stems young ones will soon appear, but where they are produced too thickly they should be thinned out. *P. Stemaria*, for instance, requires plenty of room for its large fronds, and being very prolific in young ones, they soon get overcrowded and choke each other. I may here add that although the *Platyceriums* may be grown without any soil, or even without the Sphagnum, they do better if some fibrous peat

is bound on with the Moss. It is not necessary to cover the whole surface, but if used where most convenient to bind it on, the roots will soon find it. With the *Adiantums* it is best to confine each sort to a separate stem and use comparatively small stems. *A. assimile* is one of the best for the purpose. *A. setulosum* may also be recommended, and most of the varieties of *Capillus-Veneris*, *imbricatum* being the most beautiful and particularly adapted for the purpose. It has sometimes been called the hardy *Farleyense*, and when seen at its best it certainly has some claim to the distinction, for, though of dwarf habit, the individual pinnules are almost as large and beautifully cut. The *Nephrolepis* most suitable are *pectinata* and *philippinensis*, the larger-growing sorts requiring more root-room than can well be given. The two referred to should have as much soil bound in with the Sphagnum as possible. If a plant is put at the top of each branch of the stem they will soon make long rhizomes and cover the lower portion with young plants. The rhizomes may require regulating a little or binding to the stem. As the rhizomes of *Blechnum occidentale* spread slowly, more plants may be used, and as seedlings are usually plentiful they may be had at a small cost. There being few with spreading rhizomes which have the brightly-tinted fronds, this should always be included. *Hypolepis distans* and *H. repens* both spread freely and soon cover a large space. All the smaller-growing *Polypodiums* that have spreading rhizomes do well under this treatment, and many others not referred to above. I should hardly recommend the beautiful *Pteris scaberula* for the purpose, for, though the rhizomes spread freely, it delights in a moist, cool atmosphere and requires a good loamy compost. The *Gleichenias* also love the atmosphere of a damp, cool pit, where they get the light without being exposed to the sun. *G. dichotoma* is an exception, and though this likes more warmth and spreads freely, it does best in a moist, shady nook. In selecting stems for the purpose almost any

trees of suitable shape may be used. The first I saw used were cut from Cherry trees. Oak stems are perhaps the best where they can be had. I believe those used at the Temple show were Plum, and used green as they were cut down. In preparing them for use I prefer to fix them on to a good block of wood. They may be fixed in pots, but in moving about they are liable to get broken. A block of wood is more in character, and a few erect-growing Ferns may be grown and form a nice base. In fixing the Ferns, wire should be used for those which do not take hold of the stems readily, and until well established they require careful attention in regard to watering. If new Sphagnum is used it will soon grow, and then will retain a great amount of moisture, moist Sphagnum always keeping fresh and sweet when it is growing.

A. HEMSLEY.

Hardy non-British Ferns in Yorkshire.—*Adiantum pedatum* grows luxuriantly here and resists spring frosts, which turn brown the fronds of *Pteris aquilina*, *Lastrea Filix-mas* and *Athyrium Filix-femina*. *Polystichum crinitum* is also luxuriant, but not so hardy as *Adiantum pedatum*. *Polystichum acrostichoides* is sometimes very slightly touched by frost. *Onoclea sensibilis* is never damaged. *Struthiopteris germanica* is luxuriant and very hardy. *Struthiopteris pennsylvanica* is weaker in growth and liable to be touched, but not seriously hurt, by spring frosts. *Struthiopteris orientalis* is hardy, producing, as do the others of this genus, its fertile fronds each year. *Osmunda cinnamomea* and *O. Claytoniana* are quite hardy. *Osmunda gracilis*, brought me from the Organ Mountains, Brazil, where it grows on dry grassy banks with *Zygopetalum Mackayi*, is earlier in growth, its pinkish fronds resisting the spring frosts better than *O. regalis*. To these we must add the neat and fragrant *Lastrea fragrans*.—R. MILNE-REDHEAD, *Holdenclough, Clitheroe, Yorks.*

Gold and Silver Ferns.—These belong to the tropical fernery, and must have a temperature of 65° at night. They will do with 5° more, but it always seems to me to be a waste of heat to run up the thermometer higher than is necessary

for keeping the plants in health. Many of the *Gymnogrammas* make very handsome specimens, and as they are easily raised from spores it is a mistake to keep the plants when they begin to decline, or to attempt propagation by division. The plant is never so handsome as when it is grown vigorously, and seedlings are more vigorous than plants raised in any other way. These should be grown in a lighter, sandier soil than *Adiantums*. A third of very turfy loam, and the remainder fibrous peat, leaf-mould, crushed charcoal and sand, will suit them well. Drain the pots well, and place a handful of rough, fibrous bits of soil on the drainage. Pot firmly, and guard against over-watering till the roots are running freely in the new soil.—H.

Exotic Ferns for the open air.—The American Maiden-hair, sometimes called the Bird's-foot Maiden-hair, from the formation of its fronds bearing a fancied resemblance to the spread foot of a bird, is one of the most beautiful of the *Adiantums*. It succeeds admirably in the open garden in the south-west, where, if planted in a sheltered nook in deep, moist soil of a peaty nature, its elegantly-arched fronds will attain a height of 2 feet. It is a deciduous species, and on this account is often passed over for conservatory decoration in favour of less ornamental kinds that retain their foliage through the winter. Its deciduous habit, however, renders it practically hardy, as a little leaf-mould scattered over the dormant crowns makes it secure from effects of frost, even as far north as Yorkshire. Though many of our native Ferns leave little to be desired in the way of beauty, the charm of the open-air fernery is considerably enhanced by the introduction of such exotics as *A. pedatum* and other graceful strangers, whose presence lends an additional charm to the picture. Of these the Ostrich Fern (*Struthiopteris germanica*), that, in spite of its name, is as uncommon in Germany as it is common in North America, is a noble subject bearing tall, arching fronds, which, although they do not in this country attain the length of 10 feet, as they are said to do in Pennsylvania, are strikingly effective. The Sensitive Fern (*Onoclea sensibilis*), also a native of North America, is another charming plant for naturalisation in the outdoor fernery. This, although not such a vigorous grower as the preceding, is equally decorative, producing deeply-cut, polished fronds about 2 feet in height. The Japanese *Davallia Mariesi*, a dwarf evergreen Hare's-foot, will also live in the open in sheltered spots in warm localities, as will the fine *Woodwardia radicans*.—F.

ROSE GARDEN.

NEW OR LITTLE-KNOWN ROSES AT THE CRYSTAL PALACE.

It seems to me that raisers are introducing too many of the unattractive magenta-rose-coloured varieties that have such a lamentable tendency to fade when cut. Conway Jones, Daisy, and Robert Duncan belong to this type. They may have good form, but that is useless if the colour is not bright. Mrs. Cocker is evidently a Rose come to stay. It is of a beautiful clear pale pink, and the high globular centre of the flower seems to make this Rose a formidable rival to Baroness Rothschild, a variety but sparsely represented at the Crystal Palace. Mrs. Edward Mawley was well shown by Mr. Mawley and also the raisers. Other promising kinds not in commerce were Mildred Grant, something in the way of Catherine Mermet, but lighter. This may be a good variety, but I did not think there was sufficient difference between it and Muriel Grahame. Alice Grahame is more distinct; it has lovely pointed petals, and of a shade of colour in the way of Souv. du President Carnot. Killarney is of a pretty colour, but very thin. It reminded me of a refined Mme Marie Lavallée. Agnes Henderson resembled very closely a little-known variety named Rosomane Alix Hugier. Janet Scott appeared to be very distinct. In style of flower it resembled

Caroline Testout, but in colour it was of the Victor Verdier type. Ulster is rather disappointing this season, although when it obtained the gold medal I was very pleased with it. Bessie Brown was shown very good. It has a well-formed centre, deep and pointed, but in competition White Lady surpassed it. This latter Rose was shown in magnificent condition. Another kind having a close resemblance to the two last-named was Mme. Jules Finger. I have always liked this Rose, but I have never seen it shown so well as at the Crystal Palace this year. Beauté Lyonnaise is evidently a good exhibitor's Rose. The colour is lemon-white, clear and beautiful, and the massive globular-formed flowers are nearly 3 inches deep. Perhaps one of the loveliest new Roses shown was Ferdinand Batel. The flower, somewhat resembling Antoine Rivoire, was of a lovely apricot and orange tint, a colour at all times most attractive. Antoine Rivoire was also well exhibited. Its somewhat flat, but very regular flowers were rich in colour. Another of these Hybrid Teas to gain admiration was Mme. Cadeau Ramey. It is such a grand high-centred flower, that one will expect to see it in every stand in a year or two. Mme. Eugène Boulet was very good, reminding one of Clara Watson, but with more orange colour in it. Jubilee appeared to me to be too much like Prince Camille de Rohan. It is an attractive dark Rose, and if it turns out only a shade or two darker than the old kind mentioned it will be a great gain. It is here we want more advances made. Empress Alexandra of Russia was most attractive in the first-prize box of Teas. It is of a lovely colour and will doubtless be more frequently seen when it can be had from cut-back plants. Tom Wood was well shown. It is a good light red Rose and very reliable. Mrs. F. Cant and Edith Turner are both very pale pink Roses of good form. I cannot see that so many of these H.P. and H. Tea Roses are wanted. It is true both these kinds have a silvery whiteness about them rather different from other Roses of their colour. I was very pleased to see a very beautiful Rose steadily coming to the front. I allude to Golden Gate. It was one of the very few Roses other than sports that we have received from the United States. Mrs. Pierpont-Morgan was well shown, and by the side of the variety from which it sported, Mme. Cusin, it had quite a deeper shade of colour. Doubtless under glass this colour would be much increased; if so, it would be a very valuable forcing kind on account of its great freedom of flowering. Medea was noticed in excellent form. It seems to be a great favourite with exhibitors. Mr. Gray from his immense stock had selected it as one variety among eight trebles in his first-prize box. The lovely Tea Rose raised by Mr. Bennett and named Princess Beatrice was seen in good condition, and one flower received the medal as the best Tea bloom in the amateurs' class. Generally speaking, it is a bad outdoor Rose, but under glass or in a good sheltered spot its splendid flowers, something like Comtesse de Nadaillac, are very charming. Mr. Haywood had the white Maman Cochet, very pretty. At present the season has not suited Maman Cochet, but when this Rose is good the white variety must be superb. I cannot say I care much for the white Maréchal Niel. It has a soiled appearance, and it is neither white nor yellow. Marquise Litta was much in evidence, which proves it of great value both to the exhibitor and in the garden. The colour of Countess of Caledon seemed to be brighter on this occasion than I have ever seen it before. Its form is very good. The Rev. Alan Cheales is a good garden Rose, with something of the colour of John Hopper, but a much larger and less regular flower. It might possibly be a seedling from Paul Neyron.

Of the Roses put up for the gold medal, Sunrise was well to the front by reason of its very distinct colour. If it grows as well outdoors as it does under glass it will become very valuable for cutting. Duchess of Portland was promising, and Alexander Hill Gray, if not too hard to open, will perhaps even yet secure this coveted award.

It is a flower something in the way of Comtesse de Nadaillac; indeed, it might even be from the same seed-pod as Princess Beatrice already alluded to, for I believe it is one of the late Mr. Bennett's raising.

Of novelties in garden Roses, which were well to the front, Aglaia was most interesting. It is not so yellow as I expected, but certainly it will be a valuable companion to Crimson Rambler. I should take it to be of a very hardy nature, and in growth it is most rampant. Dawn is of a very beautiful tint of colour, and the semi-double flowers are attractive in the mass. Psyche is almost like a climbing Cecile Brunner. Royal Scarlet will possibly be the forerunner of some good bright show Roses. Mr. Turner's seedling Damask was pretty. The flowers are crimson, and fashioned after the manner of single Cactus Dahlias. The single Teas from Ireland are very beautiful in their way. Irish Beauty, a lovely white with flowers 4 in. across, will be a valuable addition to our single Roses. PHILOMEL.

Moss Roses, common and gracilis.—If I were restricted to the cultivation of only one Moss Rose, *gracilis* would be my selection. It is the most beautiful of all the Mosses, the deep pink buds being well surrounded by Moss. When seen together, a great difference is manifest between the common pink and *gracilis*, or, as it is sometimes named, *Prolific*. In the first place the colour is a deeper pink and the growth is much more dense. As regards the mossy characteristic, there is little difference in the two kinds. For cutting, *gracilis* is the better of the two. These Moss Roses are freely increased by layers; indeed, there can be no question that this method of propagation is best for all old-fashioned summer Roses where they are planted as permanent features in borders or shrubberies.

Two brilliant bedding Roses.—There is a difference of opinion as to which is the more brilliant Rose in the mass, Marquise de Salisbury or Princesse de Sagan? Personally, I prefer the latter, although it is not such a good grower as the former. Marquise de Salisbury, brilliant enough in the half-open state, has a tendency towards a purplish shading when fully developed. Not so with Princesse de Sagan; its scarlet-crimson opening flowers shade off to a lovely velvety maroon, which only serves to enhance its beauty. The habit of the plant is not so rigid as in Marquise de Salisbury. In a measure this is to be regretted, for in a garden Rose one requires every flower to be seen, but with this variety this defect somewhat disappears with age. But there is room for both varieties, and if a third be wanted, then I would select Cramoisi Supérieur, one of the most brilliant of the Monthly Roses.—P.

Roses at the Temple show.—The display of Roses at the Temple show was a wonderfully attractive one for the end of May, but Crimson Rambler was needlessly abundant and was easily surpassed for beauty by Carmine Pillar, good pot plants of which were shown well set with their bright crimson single blooms. Sunrise, with its deep bronze foliage and blossoms, in which tints of saffron, apricot, fawn, and chestnut blended in delightful harmony, was an exquisite Rose, and Corinna, creamy pink; Clio, silvery rose; Beauté Inconstante, shaded scarlet and orange; Empress Alexandra, coppery pink; Mme. Abel Chatenay, with deep vermilion-crimson centre, paling in the outer petals to faint rose and shell-pink, and Perle d'Or, yellow and orange, were charming in their suave colouring. The pretty little Rosa altaica, with its single white blossoms, was also shown in more than one collection.—S. W. F.

Sweet Brier Anne of Geierstein.—This, to my mind, is the second best of the whole sixteen varieties raised by Lord Penzance. The first place must always be accorded to Lady Penzance, for it is perfectly unique in colour, but for brilliancy the above variety is decidedly the brighter. Its shade of colour is identical with that of Gloire de Margottin or Gloire des Rosomanes. I can conceive of nothing more beautiful or showy than a

large group of this excellent kind where the bushes are allowed to grow naturally. It is a wonderfully vigorous variety, so much so that upon four-year-old plants I have growths as thick as the stem of an ordinary standard Rose. I saw this variety and one or two others effectively employed as a low hedge at Kew. If taken in hand when young, the growths can be bent down quite low, and in time a hedge 2 feet to 3 feet thick may be secured, which will not only give a brilliant effect for two or three weeks in June, but will also remain a sweet-scented and substantial dividing line in the garden.—P.

A fine pillar Rose.—One could almost imagine that the splendid free growing *Rosa robusta* was a descendant from Louis van Houtte, so very rich are its crimson blossoms. It is reputed to be of Bourbon parentage. Why this is so I cannot say, for we usually look to the Bourbons for some autumnal bloom, but this kind does not flower late. However, even though it be summer-flowering only, it must become very popular, not merely for its glowing colour, but also for the sturdy 7-feet to 8-feet growths it will annually produce. The effect of its brilliancy is somewhat marred by the dying off purplish colour of the old flowers. Many brilliant Roses have the same propensity, and it is quickly remedied by hand-picking. A dozen or so of this Rose planted in a large bed and trained as pillars with bushes of the sweetly fragrant blush-pink Stanwell Perpetual intermingled would produce an excellent combination, and the latter Rose would continue to blossom till frost came to prevent its buds expanding.—P. L.

Rose Mme. Wagram.—Very few people know this excellent Rose. It is true it has not been in commerce more than four years, but it certainly merits more extended cultivation. It will quickly grow into a large shrub, and yet its blossoms have all the refinement of a Tea Rose. We usually take Grace Darling as a typical variety for vigorous growth among the Teas and Hybrid Teas, but the Rose under notice surpasses this well-known kind, and yet it blooms freely, although some might be disposed to place it among the climbers. I have an idea that Mme. Wagram is a seedling from Grace Darling, for both in wood and bloom it resembles this kind very much. Its flowers are even larger than those of Grace Darling; indeed, they almost equal those of Her Majesty, but there is not quite the solidity about them as in the last-named variety. This Rose is destined to become very popular, for it is just the kind to plant in positions where Roses do not generally thrive well, and it has been noticed by many dwellers near large towns that the Teas and Hybrid Teas flourish best provided they are good growers. I know of no Rose that has the same glistening sheen upon its young foliage as this one.—P.

Rose Mrs. W. J. Grant.—In a somewhat cool season this glorious Rose is at its best. It stands unrivalled as a rich pink variety, and how freely it blooms. I like to look upon this variety in the early morning or during a showery day. Market growers should cultivate this variety by the thousand, for its buds are far prettier than those of La France, although the expanded blooms may not be useful and lasting, they being less substantial. There is always a large demand for coat flowers, and it would be difficult to name a more beautiful kind of its colour than Mrs. W. J. Grant. I have had enormous blooms of it this year upon pot-grown plants. It pays well for a little extra feeding. If I wanted a quantity of Roses just before the outside plants began to flower I should pot up a quantity of this kind and grow the plants in cold pits. Pruned early in February, such plants could be had in flower by the second week of May. In a late season the growth may be accelerated by putting on the lights about half-past three in the afternoon. This will make a considerable difference to the period of flowering. I generally find that about twelve weeks are required from the time of pruning to the blossoming for pot-grown plants, such plants having been potted the autumn previously.

Established plants would come along rather faster than this. If brick pits are not available, a good substitute would be found in turf for the sides and ends.—P.

Two miniature Moss Roses.—Many of the Moss Roses introduced in the past have certainly had traces of the Moss-like formation, but it has in many instances been of a very meagre description. This cannot be said of two charming Roses, Little Gem and Moss de Meaux. They are both delightful little Roses, the former perhaps the more interesting by reason of its rich rosy-crimson colour. It has been very happily named Little Gem. The small buds completely enveloped in Moss are no larger than robins' eggs, and even the expanded flowers so regularly formed are barely 2 inches across. Moss de Meaux has a resemblance in flower to that pretty old Rose de Meaux. Perhaps it is a little paler in colour, but it certainly is beautifully mossed similar to Little Gem. The expanded flowers in this case are even smaller than those of the latter variety. Grouped together they would make a delightful feature in the garden. Both kinds form themselves into compact round bushes. Little Gem, being the stronger grower of the two, should be placed in the centre. I like to see Little Gem upon dwarf standard Briers about 18 inches high. Most of the Moss tribe are very suitable for growing in this manner.

NOTES AND QUESTIONS.—ROSES.

Rose Mme. Abel Chatenay, raised by Pernet-Ducher, will be found of considerable value. It is not a very full Rose, but charming in colour and very free-flowering. The flowers are pale fawn-pink, shaded salmon, especially at the base of the petals.—D.

Rose Killarney seems as if it would be a valuable addition to our garden Roses, its substance is so good and the colour so bright—a soft clear pink—that it will probably be often found on our exhibition stands. The habit is good, branching, and it continues in flower throughout the season.

Rose Mrs. Frank Cant.—This is a very attractive Rose of a peculiarly clear shade of pink, the reverse of the petals silvery white, the shape good and the flowers sweet-scented. The plant is vigorous and the growths upright, each stem producing a flower. It will be found a valuable acquisition for exhibition. I am told that it is a valuable pot Rose.—D.

Tea Rose Beryl.—This is a very pleasing addition to what are now known as button-hole Roses; the bud is long and pointed and the colour a bright orange-yellow, approaching that of William Allan Richardson. It is a strong grower and flowers continuously throughout the season. I think it might be aptly described as a deep yellow Gustave Regis. How is it that this latter Rose is described as a Hybrid Tea, while Beryl is described by its raisers as a Tea?—D.

Rose Cheshunt Hybrid.—This I find satisfactory in all soils and situations where a Rose will grow. In this garden it does well in a cold Peach house, as also on a north wall outside. In this position I get some grand blooms, and from early in June they are most abundant. Last year I saw this grown in a garden near Sherborne as a standard on the turf, the shoots, a mass of bloom, sweeping the ground. Reine Marie Henriette is a glorious Rose when growing on a warm wall in the open.—J. CROOK.

Rose Bennett's Perpetual.—I cannot understand why this was named Perpetual, except that the large heads of bloom continued to open over a long period. This is a Rose that ought to be more known. This kind is a grand companion for Crimson Rambler. The habit is much the same and it blooms at the same time, and being pure white, blends well with Crimson Rambler. Growing against a high wall it makes a fine show when not cut in too close. I have several old trees growing about the abbey.—J. CROOK.

Rose Mme. Rene Gerard.—This will assuredly be as much sought after as its assumed sister, Souvenir de Catherine Guillot. Whilst embodying in its colouring much of the coppery tints that are so characteristic of Ma Capucine, we have in this Rose not only a large bloom, but also other tints such as saffron-yellow and delicate mauve upon the edges and outer petals that make it one of the most attractive varieties in point of colour that I know. It will never be a show Rose, the petals being too few in

number, but it must take rank as one of our best Teas for the garden. It is a good grower, much superior to Ma Capucine.—P.

Rose Myrianthes renoncule.—The varieties of *Rosa sempervirens* furnish us with some of the most rapid climbers. The peculiar beauty of the above kind is found in the deep rosy crimson buds and the pinkish white expanded flowers, the combination producing a very beautiful effect especially when a plant is covered with a mass of its graceful sprays of blossom. Another uncommon feature of this Rose is that the centre petals have a button-like appearance produced by several of them curling over as if to protect the stamens. I consider this variety, with Félicité-Perpétue and Flora, the three prettiest Roses of the group.—P.

FLOWER GARDEN.

PLANTING PYRETHRUMS.

IF I could do so, I would always transplant in August. As regards autumn and spring planting, the Pyrethrum grower is in a measure on the horns of a dilemma. If he moves them in autumn they have to face the winter without active fibres, for, so far as I have observed, they make no new roots at that time of year. If, on the other hand, they are disturbed in spring, they do not get sufficiently established to resist a dry, hot time when coming into bloom, and unless occasionally well watered the flowers are small and they quickly fade. The flowers of the double varieties require a lot of moisture and nourishment to sustain them, and are poor in colour if these essentials are wanting. If transplanted early in August they are bound to make new roots, and this in good ground will have the effect of stimulating the formation of new leaves from the crown, so that, no matter what the weather may be in winter, they are in a condition to resist it. The objection to August planting is that where Pyrethrums are used in private gardens in the usual way it would not do to be disturbing borders at that time of year. Where they are grown simply for cutting in beds by themselves it is quite practicable to move them when necessary in late summer. In a dry time they should be well watered in, and with a couple of waterings afterwards their safety would be assured. Autumn transplanting will never again be practised by me. Some years ago I bought in 100 good stools for propagating, and, not knowing so much about Pyrethrums as I do now, I planted them at once. Although the winter was mild I lost 20 per cent., and many of those that came through started badly. I lifted several and found that they had not made any new fibres. Had the winter been severe with hard frosts succeeding heavy rains or melting snow, I should have lost many more. If this happened in my light soil, how would it be in heavy land? Profiting by this experience, I plant and divide now in early spring, choosing a fine dry time as early in March as possible. The ground is laid up in rough lumps during the winter, some manure being worked in with the fork, and a thorough stirring given before planting. Early in May a top dressing of manure is given, and in this way watering is not much needed, although a good soaking in May, if that month is dry, is very serviceable. In this manner very few losses are experienced and the plants make a good growth.—J. CORNHILL.

— At page 434 of THE GARDEN "J. C." gives his experience in the cultivation of these useful and beautiful garden flowers, and asks for my opinion on the relative merits of spring and autumn planting. A very great deal depends on circumstances—as much, indeed, those surrounding the plants as any that pertain to soil and

locality. I have planted within five weeks of Christmas in just the soil "J. C." describes, viz., rather light and well drained, with the most perfect success, the plants yielding splendid flowers the following spring, though, of course, not the wholesale sheaves of blossoms that older plants produce. It is well to add, however, that a neighbour who had 100 of these self-same plants fully a month before mine were planted and had quite the pick of a batch of some 3000 plants came to me in the early spring ensuing to complain that all, or nearly all, his plants were dead. And he added, by way of emphasising the care he had taken of that hundred, "I put them into $\frac{1}{2}$ -inch pots and framed them all the winter," "which is exactly what I would not have done," I responded. Being a well-known grower and prize-winner of hard-wooded plants, the thought had not occurred to him that his kindness was a mistake, if not a fatal error. But as he was fully aware that I had not put out a plant when he made his purchase, I took him to a batch of beds twenty or thirty in number and 5 feet wide and 40 feet long wherein a dead or failing plant was scarcely to be found. On the contrary, each plant was represented by a tuft of young shoots that in themselves foretold what was to follow.

The complete success in my case was due to the fact that the plants were young, freshly established pot plants, and, put out into a light, warm soil in mid-autumn, began to root afresh at once. I would not put out any sort of plant at the same time as those now referred to, and particularly would I name those divided roughly with a spade, or such as have been starved a whole season, if not more, in small pots. These *Pyrethrums* are perfectly hardy. I have never known frost harm them in the slightest degree, but I have known the plants rot and perish through deep burying of the crowns; so much so, in fact, that instead of the foliage lying prostrate on the earth, it stood erect in the air. I pointed out that the plants were 4 inches too deep in the soil, and suggested immediate lifting as a remedy, seeing they were newly planted. Many are lost by this and similar means, and just as many are lost by spring planting from various causes; so much so, that unless a system is followed in every detail, great losses may occur from either. I give two instances to illustrate my meaning, both having come under my notice within the past nine months. In the first the plants were roughly divided by the spade and planted in open beds after flowering a year ago, the planting and dividing being done before fresh growth had started. The fault was in the work being done too soon after flowering, and lack of attention in watering, &c., afterwards. In the result some hundreds of plants were lost. In the second case so-called spring division was adopted too early, and the divisions, being put forth into a heated pit, were unable to endure the experiment. In short, in every 4-feet light of the frame there were probably not more than a dozen plants that would grow at all. If well grown and properly treated there are few plants more showy than these, but they are not destined to be handled by anyone.

Many fail to grow *Pyrethrums* because the potting-up after dividing is too much trouble, yet it is the only way that anything like a high percentage of the plants can be made secure. I have planted *Pyrethrums* at almost all seasons, even when 15 inches of growth have been made, without losing a plant, but then I never failed in the water supply, for, as "J. C." aptly remarks, they are very thirsty subjects. In those gardens where the soil is light and well drained, and provided the plants were only recently established in the pots, I would not hesitate to plant at any time. Taking the plants from the open and dividing roughly with a spade should only be done in early spring, say the first two weeks of April, or rather earlier if growth is early in the season. It is a fatal mistake to shorten the roots of such as these quite close with a knife. On cold soils, and indeed any heavy or wet or low-lying land, autumn planting is best avoided. In these the *Pyrethrum* generally requires more care

than on lighter soils. The best all-round success may be had from the following treatment: Select the plants when 4 inches or 6 inches of fresh growth have been made in early spring, lift them, wash away all soil in water, and with the point of a strong knife wrench rather than cut the plants asunder. This wrenching applies rather to plants that are yearlings and divided as such, and not to two-year-old plants or upwards, for these will provide as many good rooted plants as there have been flower-stems to the plant, and are much more readily divided with certainty than are the younger plants of a year old. These latter I have propagated by tens of thousands, not merely from divisions, but also from cuttings, i.e., shoots that could not be secured with roots attached. This, however, is frequent in year-old plants, and it is here that the washing of the roots is a great gain. This not only enables the operator to see how to work, but he is able to secure cuttings of the right stamp, namely, those with a heel attached. In short, no others of these *Pyrethrums* will root. Thus carefully divided and potted at once, shortening neither top nor bottom beyond what is absolutely needed, the plants must be put into a cold frame for a month or six weeks. Heated frames are a great mistake. Thoroughly water after placing in frame and ventilate each morning, watering being done when needed when the frame is first opened. Years ago, and indeed still, with new or choice kinds these plants are always divided up to a single crown or growth, and if small at the start these make far better plants than large tufts divided and replanted in any crude fashion. For many years it was my custom to divide up in early April and have the plants ready for planting by the third week in May, the plants frequently flowering well in the ensuing autumn. Another way of increasing is after the summer flowering is over and when young growth once more is in evidence. At this time even greater care is necessary because of the usually dry state of the earth, and potting is just as necessary then as in spring. I would, however, sanction dividing and planting in the ground at once, provided the plants had been thoroughly saturated a day or so previous, that not more than six or eight divisions were made of any two-year-old stools, that the roots were left intact to be planted in deep trenches, and that at least one thorough soaking be given after planting. If this cannot be done the plants will be best potted as before, and when established plunge in the open air in ashes or the like. *Pyrethrums* are such voracious subjects that they require dividing and replanting every two years.—E. JENKINS.

The Sweet Sultan.—Among the host of popular annuals there are few more useful for cutting than this, and it is a great pity it is not more grown. Here on this heavy soil strongly impregnated with lime it does well, growing very strongly and flowering with great freedom. Both the mauve and the white forms should be grown, as they are both pretty either arranged together or separately. The easiest plan is to sow very thinly in drills in March and thin out the plants when large enough, as they are impatient of root disturbance.—SUFFOLK.

Spanish Irises.—Presumably these are the very cheapest of the Irises, but they are none the less beautiful on this account, and should be seen in every garden. Some people object to them owing to the dry-looking foliage standing so long after the flowers are over, but they are no worse in this respect than many other bulbous plants, and in any part of the garden where tidiness is particularly essential the plants may be drawn up and thrown away or planted about the shrubberies, so cheap are they. But cheapness ought not to be made a reason for ill-treating a lovely plant, and that the Spanish Iris undoubtedly is.

Lilium rubellum.—I have just bloomed this very charming addition to our dwarf-growing Lilies. My bulb produced two blooms. The habit of the growth is slender and from 18 inches

to 2 feet in height. The colour is very soft and chaste; it varies, I believe, a good deal from light pink to rose. It somewhat resembles *Lilium Krameri*, though evidently of a more robust habit than that species. There is no doubt that it will be found a charming addition for the front places in borders and also for pots. It flowers in June and seems to do best in light sandy loam, not in peat and leaf-mould, as many Lilies do. In addition to all this, the price of the bulbs is not high, so that Lily lovers may procure them in quantity if they like.—D.

Lily of the Valley in Norfolk.—I think Lily of the Valley in a wild state is much more common in Norfolk than in most counties; at least, I know of three estates where it grows in great profusion, large quantities being picked. This season large consignments have found their way to Norwich Market, where they have found a ready sale. The improved strains so much grown for the London markets, the bells of which are very numerous and large, are all very well in their way, but to my mind not to be compared for fragrance to the wild flowers from the woods. I do not consider that retarding the crowns, so as to have them in bloom during the summer and early autumn months, answers any good purpose, as, flowering at that date, they seem equally as much out of place as Violets would be.—J. C.

Tree Lupines.—The awarding of a certificate of merit recently at the Drill Hall to a new white-flowered tree Lupine may well help to draw attention to the merits of these hardy plants, of which there are several other varieties. I saw recently growing against a south wall a wonderfully fine plant of *luteus* that spread from 10 feet to 12 feet wide and several feet in height, and was a mass of yellow flowers. The plant gets fairly hard cutting in each spring, and that form of treatment all the section seems to appreciate. Elsewhere, a fine plant of *L. polyphyllus* was very effective. Whilst making huge shrubs when in somewhat sheltered positions, plants have a tendency to become loose unless occasionally cut back. No one need be afraid to use the knife upon them if the pruning be done about March.—A. D.

Showy rockwork and edging plants.—Reference was recently made in THE GARDEN to the value of *Aubrietias* for the rock garden and for use as edging to other beds. The finest display of *Aubrietia violacea* I have ever seen was in a villa garden in this neighbourhood during last April and May. Not only was it used for draping rocky banks which formed the boundary to the garden, but whole beds on the well-kept lawn were filled with it. The garden being comparatively new, the soil in the beds and borders was in good heart, which the various spring-flowering subjects seemed to appreciate. The dense mass of violet-coloured flowers contrasted finely with the pure white trusses of *Arabis*. These two subjects of themselves make a fine display, and they last in full beauty a long time provided the weather is at all favourable.—NORWICH.

A proliferous Nymphaea flower.—In the current number of the *Paris Revue Horticole*, M. H. Dauthenay gives on the authority of the well-known French horticulturist, the Comte de Bouchaud, an account of a most curious instance of reproduction which occurred in his garden during the latter part of last and early part of this year. He noticed that a flower of the beautiful yellow-flowered Water Lily named by its raiser (M. Marliac) *sulphurea grandiflora* did not die away with the others produced during the season, but remained with its stem still plump and green all through the winter after all the others had quite disappeared. On examining this flower and stem in March of this year, he was astonished to find an entirely new young plant had developed out of the old flower with a set of new roots, measuring a foot in length, issuing from its base, which had not yet, however, reached the soil. It will be curious to see what flowers this new plant produces when it blooms.—W. E. GUMBLETON.

ACANTHOLIMON GLUMACEUM.

THERE are few plants which for general usefulness can rival this charming, prickly Thrift, known also by the name of *Statice Ararati*. Its native home is in the mountains of Armenia and adjacent countries, where it may often be seen covering the hillsides in great profusion. For rock garden or border we have few plants to equal it. The extremely narrow grass-like leaves end in sharp, stiff points, and form an evergreen carpet somewhat glaucous in colour, from which spring in early summer a profusion of flower-spikes each about 4 inches high, and bearing from five to eight flowers of a pleasing rose-pink colour.

The plant here illustrated I photographed in Messrs. Veitch's nurseries at Exeter, where it does excellently on a small rockwork. Here it is planted among pieces of volcanic rock known as "trup," but I have often planted it in soil mixed with broken sandstone or limestone with equally good results. *Acantholimon glumaceum* is also an excellent plant for massing, and large colonies of it on sloping ground, either on rockwork or in an ordinary border, look exceedingly well and last for a great number of years if the position is sunny and well drained. I have seen in a previous number of *THE GARDEN* the statement that *Acantholimon glumaceum* cannot be propagated by division. This is certainly not my experience, as I have here in Exeter seen plants divided year after year with the best results. F. W. MEYER.

Elmside, Exeter.

Hemerocallis aurantiaca major.—This has been a most disappointing plant with me. I have had it three seasons, and although planted in a bed where the older kinds *H. fulva*, *H. flava* and *H. graminea* make immense clumps and flower freely, this has never done much. The growth on most of the plants is very poor, and one only is throwing up what looks to be a very puny flower-spike. It may improve in time, but so far I am afraid I shall not get such flowers as I have seen exhibited at the Drill Hall and other places. —SUFFOLK.

Gillenia trifoliata.—It is not everywhere that a suitable soil exists for growing this, one of the most charming of hardy plants; but where it does, or where the soil may be altered to suit it, it ought to be grown. The stems are peculiarly elegant and are terminated by loose panicles of variously coloured flowers, the red form being the prettiest. It does best in a moist, light soil, and the roots have a great affinity for peat and leaf-mould. The margins of ornamental streams or low-lying parts of the garden suit it, and it is easily propagated by division of the roots any time when at rest, preferably, perhaps, just before starting to grow.

Pæonies and Roses.—It was an open question at the recent Drill Hall meeting whether the Pæony or the Rose predominated, for certainly both were represented in great force and splendid quality. Not that all were alike first-rate, for there were inferior kinds in both families, and perhaps the weak point is that the reds are too much alike in each group. The fact that some of the best Roses are devoid of fragrance is just as much marked in the Pæony family, the very showiness of the flowers compelling one to put the matter to the test, only to feel disappointment at its absence. In the garden, however, these things are the finest of midsummer flowers, and just now the Pæonies are superb.

Erigeron glaucus.—Some few plants, notwithstanding their decidedly showy character, appear slow to come to the front, and this, I think, is one of them. For a plant so comparatively dwarf, free-flowering, and so good a perennial for the most part it is by no means an everyday subject. The large flower-heads are fully 2 inches across, the ray florets of a blue-lilac

tone, which with the yellow disc render the plant attractive for some time. Some nice plants of it in a position sheltered from the sun from 1 p.m. daily, have been a long time in flower; indeed, with such burning heat and general dry weather as have been experienced recently the plants appear rather to relish this place. In the border, however, in deep soil the plant is not at all difficult to please or establish, and fully appreciates a good all-round treatment. For the rock garden it is perhaps less suited. It is from North America and of sub-shrubby character.—J.

PROPAGATING PINKS.

THE propagation of the Pink is effected by a variety of means, each and all having their advocates. Perhaps the most common way is by taking cuttings, or what are more generally known as pipings, striking these in pots of fine sandy soil. Others adopt the more rough-and-ready, though I do not think so satisfactory, plan of dividing old clumps into tiny tufts and planting these out in well-prepared beds where they are to flower. These separated portions root fairly quickly from the base and produce a good many blooms the following season. The best plants, however, I ever had were rooted by simply layering in the same way as Carnations. A little extra time and care are needed, as the old



Acantholimon glumaceum in Messrs. Veitch's nursery at Exeter. Engraved for *THE GARDEN* from a photograph by Mr. F. W. Meyer.

clumps are somewhat dense and need thinning out, so as to allow of the fine leafy, sandy soil being worked in and the knife used. Some who require only a few plants place soil round the old clumps and layer only from the edges. Stems having several healthy growths on are selected, and thus fine stocky plants are secured for early autumn transplanting. Layering is best done when the plants are two years old, before the growths become crowded, and the sooner after flowering the better. For cuttings, a frame or handlight behind a north wall is the best, and it is imperative that plenty of coarse sand or road grit be mixed with the compost. The pots should be frequently examined, as sometimes slugs and snails attack the cuttings. Pinks do very well and have a very pretty effect in the front rows of mixed hardy borders, but both plants and bloom are often seen in an indifferent state owing to an impoverished condition of the soil. When planting fresh stock in such positions, I like to take out a good spit of the old soil and replace with some new loamy compost. Old gardeners used to bestow much time and labour on Pinks. I knew one who grew all his plants on a west border in beds. He used a rather light compost, and always mixed abundance of good leaf-mould and grit with it, in which the plants

did splendidly. He attributed great importance to early propagation. I remember the grand beds he had of the old white Pink. The improved sorts Mrs. Sinkins and Her Majesty are fine solid flowers and soon fill the basket, but the old white is charming when well grown.

J. C.

NOTES ON HARDY PLANTS.

Erythraea diffusa.—Treating this just as you would the softer and precumbent kinds of Gentians will not prove far wrong, *i.e.*, giving a porous soil of peat and turfy loam and moist position, and besides, the seeds as they ripen falling on such a surface will readily grow and afford a patch as big as desired. This pretty species may be termed for all practical purposes a creeping Gentian with bright rosy flowers, and as they come in succession the plant is one of great value. Both flowers and the evergreen foliage have a glossy effect, so that it is a good wet weather plant.

Rubus deliciosus.—There have been discussions as to where the feature or property "delicious" came in with this shrub. Fruit or seed we have never seen, so that we sought for the sweetness in the odour of the flowers. Oddly enough, some of us could never find it—practically no smell at all. Still more strange this spring, my big bush, now like a hillock of snow, is most powerfully fragrant. There is another fact that I might as well give. The flowers are less imbricate, are not much more than half the size they have been for the past twelve or fifteen years, and there are signs that fruit may form.

Potentilla flagellaris (Willd.) and **P. villosa** (Pall.).—So far as the two plants grown here under these names are concerned, if not identical, they are the same for garden purposes, and in point of fact they are both Siberian plants. The more important matter is they are early for their family and strikingly beautiful. The flowers are large, deep yellow, with orange eye, and so borne up by the stolon-like stems as to be seen to the best advantage. The dense habit and silvery grey foliage, thickly villose, go far to render them characteristic plants. Naturally these plants do not like our wet winters, but a bit of glass kept over them makes them quite safe.

Scilla verna.—Though this is the heyday of Scillas, and even if one chances to live in a Bluebell district, there is something about this pigmy species, with its sheeny dark blue bells topping the stout 2-inch-high scapes, that one cannot fail to at once recognise. If grown in groups of a foot or more in diameter, such groups are distinctly telling among other dwarf things. The way in which the grass sets off at right angles with the flower-scapes helps to make the most of the flowers, bringing them into the boldest possible relief.

Morisia hypogæa.—This is at once one of the humblest yet gayest of all our spring bloomers. It has been in flower quite two months. A plant more indifferent to conditions of soil, wet and every kind of weather it would be hard to name. Only those who have seen it can form an idea either of its peculiar habit or beauty.

Woodville, Kirkcaldy.

J. WOOD.

Propagating Polygonum baldschuanicum.—In the article concerning this *Polygonum* on page 454 its propagation is spoken of as rather difficult, which is indeed the general experience. A correspondent of the French journal *Le Jardin* in the number for May 20 of the present year points out a method of increasing it which is at least well worth trying. After a few general remarks concerning the plant and the different means of increase that have been tried, the writer

goes on to say: "After trying various methods with but little success, we resolved some weeks ago to take the woody shoots of the preceding year and treat them in the same way as is done in the case of the Vine when propagated from eyes. The branches were cut up into lengths and laid flat in well-drained pans of soil with a layer of silver sand on the top, the whole being placed on a moderate hotbed. Slightly burying them in the sand by simply pressing them with the fingers and kept sufficiently moist, these cuttings gave very good results, especially those that had been made rather long—that is, from 8 to 10 centimètres in length."—H. P.

Top-dressing Pyrethrums.—Owing to the severe drought experienced last summer, and which was in this locality prolonged through the month of September, my Pyrethrums were much defoliated and had a very miserable appearance. Early in October I gave them a liberal top-dressing of manure, and with the advent of cool, moist weather new leaves pushed from the crowns, so that by the close of that month the plants looked as fresh and green as is usually the case in spring. The effect of the top-dressing, which was in a great measure worked into the ground by worms and rain during the winter, is very striking, and shows that to have Pyrethrums in their best form they must have an abundance of rich food, which in the case of established plants should be applied early enough to ensure the manurial properties being absorbed by the soil by the time the plants come into growth. A bed of two-year-old plants is very effective and will furnish a quantity of good blooms for cutting for several weeks to come. Pyrethrums are, I think, at their best in the second and third years after planting. In most soils they are better for being occasionally divided and replanted in fresh well-manured ground. In forming a collection of these showy flowers, it is well to secure as lengthened a blooming time as possible by means of the early and later-flowering kinds. Some varieties come into flower quite a week or ten days later than others.—J. C. B.

OUTDOOR FLOWERS FOR CUTTING.

THE spell of exceptionally hot weather experienced since the beginning of the month has brought the flowers out very fast, and at the present time (June 13) material for cutting, both in the way of rough and choice things, is abundant. Roses on walls, including Gloire de Dijon, Safrano, Homère, W. A. Richardson, and Waltham Seedling, are a mass of bloom. Considerable difficulty is, however, experienced in keeping them clean, aphids being very troublesome. How strange it is that those who ought to know better and who have repeatedly heard the true reason will persist in calling the deposit on the leaf that comes from the aphids "blight," and imagine that it is in some direct way attributable to an easterly wind. That this is in a measure answerable for the same when a sudden fall in the temperature occurs and growth is thereby arrested is doubtless the case, but the actual cause of the disfigurement is a different matter altogether. It seems a trivial matter to note, but it certainly is extraordinary that after all the information furnished in gardening papers one is continually asked for a remedy for blight on Roses. The maggot is very troublesome in places, and where not carefully picked will, I fear, be answerable for much disfigurement of buds. Next to Roses, perhaps the flower most in favour at the present time is the Spanish Iris. All are beautiful, but clearly defined pure shades in white, blue, and yellow seem most acceptable in a cut state. They flower freely on dry sunny borders, but the foliage goes quickly in such a position, even, in fact, before the flower is at its best. They are more satisfactory with me in partial shade, that is, on a west or north-west border. Naturally the expansion of the flower is delayed here, which considerably prolongs the season. Aquilegias are just now at their best. The pale yellow *A. chrysantha* is much in request, and a large flower with (to borrow a description

from the Daffodils) a white expanding trumpet, if the inner petals can be so termed, and a lavender perianth is a very refined and beautiful bloom. Good forms of Pyrethrum and East Lothian Stock, just now at their best, also furnish an abundance of flower and are very acceptable. If flowers of gorgeous hue are in request, two of the best things at present available are Antirrhinums and Gaillardias. Those who have only tried the dwarf bedding Snapdragon in shades of white, yellow, and crimson have a treat yet in store in the tall branching varieties of very vigorous habit with very large spikes and individual blooms. From seed sown last July I have plants now 3 feet high with the first spike just at its best, the shades in selfs varying from white and yellow to deep crimson and maroon, besides very striking mixtures, as dark scarlet with a golden lip, and crimson and carmine striped on a yellow ground. The selection is from a firm who are specialists in hardy flowers, and who catalogue twelve distinct named varieties in this strain. To obtain plants for next season it is advisable to start soon. Prepare boxes by filling with a rather light compost, and give a good soaking before sowing; cover the seed lightly, place in cold frame, and shade from hot sun. Transplant into nursery beds as soon as the seedlings are of sufficient size and plant out in autumn or early spring as may be most convenient. Planted in clumps in different shades with an undergrowth of Tufted Pansies, they make very fine summer beds. The first spike should be removed as soon as it shows signs of seeding to allow of the development of side growth. It is almost needless to add that the Antirrhinum is a capital dry weather plant and stands drought well. The same cultural remarks so far as time and manner of seed-sowing, pricking off and after-planting are also applicable to Gaillardias, which are just now very showy. A special bed might well be devoted to these, for they are of very vigorous habit, and if planted on a border with other things are apt to monopolise much more space than has been assigned to them. Of things that last but a short time in water now either in bloom or coming out, as, for instance, Pæonies and Poppies, both single and double, I use very few, time not admitting of the constant attention in the way of replenishment that they require. They are, however, employed on special occasions, such as dinner-table work, where they are only wanted for a few hours. Among the choicest outdoor white flowers at present available besides Roses are Spanish Iris British Queen, Princess Alice Stock, Albino Pink (far and away the best white) and Pyrethrum Aphrodite. The tiny flowered annual Gypsophila, although insignificant in the individual blooms, is very useful when the panicle is fully expanded. E. BURRELL.

Claremont.

Water Lilies.—The prevailing tropical heat seems to suit the Water Lilies, for their growth is now very rapid and the blossoming is profuse. I fancy so much bright sunshine causes some of the deeper coloured varieties to be a little paler than is the case in duller weather. As yet all the varieties grown here are not in bloom. The following are some of the most prominent at present, and commenced blooming in the order placed: *Nymphaea caroliniana perfecta*, a comparatively old-established plant, opened its first blooms at the end of May, followed quickly by *N. Laydekeri rosea* and *lilacea*, *N. gloriosa*, *N. Marliacea albida*, *N. Chromatella*, *N. lucida*, *N. fulva*, *N. Ellisiana*, *N. odorata sulphurea grandiflora*, *N. odorata exquisita*, and I expect more to expand during the week. In planting one (the chief) pond I planted strong clumps of *Richardia athiopica* thinly, and now they form pleasing objects in full bloom, producing very fine spathes in quantity, and effectually breaking the flatness of the surface. I think the beauty of the pond is enhanced thereby. Another experiment was tried at the same time, viz., introducing fish (golden of sorts), with a view to their agitating the sur-

face water and thus preventing the growth of confervæ. Of course it is yet too soon to say positively that it is a success, and that the fish will permanently prevent the growth of confervæ in stagnant water; still, they have justified expectations in this respect so far, that more fish have been introduced to other smaller ponds with the same end in view. Certain it is that the water stood twelve months before the pond was emptied and refilled with no sign of confervæ disfiguring its surface. I should be glad to learn the experience of others on this point.—J. R.

FLOWERS IN THE ROCK GARDEN, KEW.

HAVING but an hour to spare in Kew Gardens after visiting the Temple show, I had but little time to even glance at its diverse attractions, but bent my way at once to the rock garden, which I found interesting as ever. *Achillea umbellata* was a mass of white flower-heads, and *Arenaria balearica* clothed the rocks with its tracery of creeping foliage thickly starred with diminutive white blossoms, while *A. montana* was also flowering profusely. *Achillea rupestris* was also a breadth of white, and the pretty lemon-coloured *Alyssum saxatile citrinum* still showed its soft tint. *Anthemis carpatia* was bearing its white stars, and *Anthyllis vulneraria* var. *alpestris* its yellow flowers. Of Anemones, *A. baicalensis* and *A. multifida* were in bloom, as were *Aster alpinus* and *A. peregrinus*, the flowers of the latter being slightly larger and of a rather deeper shade of blue, while *Aubrietias* in variety were also blossoming. *Chrysogonum virginianum* disclosed its yellow flower-heads, and a colony of *Cypripedium montanum* in full bloom afforded a pleasing sight. C. spectabile, in a moist rock-surrounded nook ooked the picture of health and was throwing up vigorous leafage. *Daphne alpina* was carrying its white flowers on its spreading branchlets, and *Delphinium trollifolium* was in bloom. A hybrid between *Dianthus cassinus* and *D. deltoideus* was bearing blossoms of a very bright cerise-pink, and the handsome *D. superbus* displayed its deeply lacinated petals. *Dicentra eximia* was thickly set with its flower-scapes of reddish purple, and *Dryas octopetala* was studded with its white golden-centred blooms, while on the bank above some fine specimens of *Eremurus himalaicus*, with lofty bloom-spikes but partially expanded, towered to a height of 7 feet. The beautiful *Gazania nivea* var. *latifolia* was bearing its chaste white blossoms, and *Geranium cinereum album* showed its snowy flowers, and a number of corms of *Gladolus anatolicus* were also blooming. *Hippocrepis comosa* was a cloud of yellow, and the Violet Cress (*Ionopsisidium acaule*) bore its countless minute blooms of pale amethyst, while *Lathyrus hirsutus* was set with its mauve and white blossoms, and *Linum arboreum* made a spot of bright gold. *Lonicera pyrenaica* was in flower, and *Maianthemum bifolium*, perhaps better known under the title of *Convallaria bifolia*, was blooming well in a large mass, the small white flower-scapes exquisitely set off by the broad Lily of the Valley-like foliage. *Onosma tauricum* held its flower-heads of pendent yellow bells, and *Ornithogalum arcuatum* reared fine spikes of white bloom to a height of well-nigh 3 feet, while *Paradisea liliastrium*, more widely recognised under the title of *Anthericum liliastrium*, was carrying spires of drooping white flowers. *Pentstemon confertus* bore its little flower-heads of light blue, P. Scouleri crowned a rocky ledge with its mauve blossoms, and *Potentilla splendens* had its spreading growth starred with white flowers. *Ramondia pyrenaica* was in the best of health on the perpendicular face of a moist and shaded mass of rock facing the bed of *Cypripedium spectabile*. Both the mauve-blue and white varieties were represented, there being about fifty plants in all, some of them being of large size and bearing as many as thirty blossoms. The fine leaves of *Rodgersia podophylla* bordered the path at one spot, and two lovely single Roses were objects of great beauty on the slope above the rockwork. These were large bushes spangled

with expanded blooms and buds, one being the Himalayan *Rosa sericea*, with white blossoms, and the other *R. cinnamomea*, bearing pale pink flowers. Of *Saxifragas*, a number were in bloom, amongst which may be mentioned *S. aizoon* and its yellow variety, *S. cartilaginea*, *S. cochlearis*, *S. cotyledon*, a hybrid between *S. cotyledon* and *S. pyramidalis*, *S. crustata*, *S. cuneifolia*, *S. Hosti*, *S. lantescana*, *S. lingulata*, *S. luteo-purea*, *S. montavoniensis*, *S. pyramidalis*, *S. stenoglossa*, and *S. Vandellii*. *Vancouveria hexandra* was bearing its graceful white flower-scapes well above its light green foliage, *Veronica*s in variety were in bloom, *Viola pedata* and *V. pedata alba* were in flower, and *Wahlenbergia Kitaibeli* was covered with its mauve-blue blossoms. S. W. F.

Peach-leaved Campanulas.—These are now very showy in the border, and in their varying forms are valuable when in groups and the like. Of the white forms the best are *C. persicifolia alba coronata* and *C. p. alba grandiflora*. In some soils these plants are quite at home, and in others require some care to prevent the stock becoming greatly diminished. In some measure this may be due to the free-flowering character of the subjects, which naturally assists in lessening the vitality of the plant. The old double white is still a good plant, particularly where the soil is not too sandy or hot. Where a too light soil exists, and where the plants become a prey to thrips in summer, greater attention should be given them. Shade when not accompanied by hungry tree roots is excellent for these Peach-leaved kinds, and in such position the plants suffer less from insect pests. At a recent meeting of the Royal Horticultural Society a new variety of this group was shown in which the flowers are much larger than in any of the older forms, more widely expanded than the fuller double kind, and less confused generally by the petals being fewer in number. Hardy plant growers were surprised so good a plant received no recognition.

NOTES AND QUESTIONS.—FLOWER.

Gaillardia Langport.—This is the name of one of the largest *Gaillardias* yet seen, probably a selected form from the well-known *G. grandiflora maxima*, which it strongly resembles. Provided it is as free and as good as the old kind, it should prove a showy subject for the border.

Tufted Pansy Ophelia.—This has been in splendid form lately, and during the last few days its large rayless blossoms have developed almost phenomenal proportions. The flowers are circular and of good substance, and the colour may be described as a deep heliotrope-blue, the deeper colour being more pronounced on the upper petals. Although the growth is strong and vigorous, it is not in the least unruly.—C.

Lupinus polyphyllus Somerset.—Till the advent of this kind the herbaceous *Lupines* were in colour confined to blue, purple, and white, but this kind provides the totally distinct shade of soft and pale yellow. Judging from the soft, glistening and downy character of its leaves, one may surmise that the yellow Tree Lupine had played a part in its production. In any case so good and distinct a plant deserves attention from hardy plant growers generally.

Tufted Pansy Miss Gertie Waterer.—This is one of the latest acquisitions. It is a flower of medium size, absolutely rayless and pure white, with a neat yellow eye. During the prevalence of cold or very cool weather the blossoms become slightly bluish-tinted, but as seen during the present week it is one of the most delightful kinds imaginable. It is wonderfully free-flowering on stems of medium length, these standing up erect on a beautiful tufted habit of growth.—D. B. C.

Tufted Pansy A. J. Rowberry.—This variety for the two or three seasons following its introduction was often condemned because of its weak constitution and also because of the unsatisfactory character of its growth. I ventured to suggest at the time that this defect was probably owing to the stock plants being worked too hard, and this opinion seems

now to be verified, if one may judge by the plants at the present time. There are few kinds in my collection which look better, and the variety under notice is just now in the pink of condition. For some weeks these plants have blossomed most profusely, the rich deep yellow of the blossoms being very effective. Several raisers are using this variety for crossing purposes, and we may yet get the same colour with an ideal habit.—C.

STOVE AND GREENHOUSE.

HYDRANGEAS IN POTS.

In the south and south-western counties *Hydrangeas* are perfectly hardy, and when in bloom during the later summer months they are very beautiful, isolated specimens or groups having a fine effect. To ensure freedom of blooming, the growths must be thoroughly ripened, consequently there must be free exposure to the sun from all sides, the soil being a warm and well-drained one. On some soils the heads of bloom will come of a beautiful blue colour, reminding one of the colour of the blooms of *Vanda cœrulea*. Soil with a deal of iron in it is said to favour this, but I think a dry season also appears to favour this change from the normal pink colour. At Witley last season the heads of bloom were of this blue colour. This I have not noticed before. A head of



Hydrangea Hortensia in a pot. Engraved for THE GARDEN from a photograph sent by Mr. A. Young, Witley Court Gardens, Stourport.

bloom was also brought me from a cottage garden, so I take it that the extreme heat and drought have been the cause of certain chemical changes in the soil which have led to this development. One need not, however, fear the want of a particular soil in which to produce this change of colour, as it can be had quite artificially by watering with a solution of alum water. I have seen most beautiful plants produced by this means in the late Mr. Lea's garden, Parkfield, near Worcester. The plants, however, were growing in pots. As soon as fresh growth started in the spring the plants were watered with this alum solution. From the effect produced by this change of colour the experiment is well worth the little extra trouble involved.

What a fine effect large old plants have when grown in pots or tubs for standing in prominent positions about the garden. The plant, one of several, shown in the illustration was grown by Dr. Horace Swete, The Lodge, Lower Wyke, Worcester. It has been growing in the same pot for some time. In this case the plants have winter protection from severe frost, also to prevent injury to the pots from split-

ting. As soon as growth starts in the spring the plants are stood in the open air in a sunny position, where they grow away freely. The well-ripened, plump growths of the previous autumn will produce flower-heads, other shoots being formed simultaneously for next season's supply. Water must be freely applied, weak manure water being added occasionally to strengthen the flower-heads and to give tone to the whole plant.

Single heads of bloom of *Hydrangea Hortensia* in 5-inch or 6-inch pots are well-known objects during the early summer months, many thousands being produced annually by the growers who supply Covent Garden Market. I have grown them for this purpose with heads of bloom 15 inches in diameter. Strong cuttings were inserted singly in small pots in May, and as soon as rooted these are potted firmly into 5-inch pots. When established the plants are stood in the open air with full exposure to the sun. Being well supplied with water, the plants remain in the open air till the early part of November, when they are stored in light, cold frames. From Christmas onwards batches are introduced into an intermediate temperature when they come into bloom. As soon as the flower-heads show, manure water must be freely applied, so as to encourage large heads of flower.

The white-flowered *H. Thomas Hegg* is a very free-flowering variety, whereas *H. Hortensia* flowers from the plump buds at the apex only of the well-ripened shoots. The variety in question will form flower-heads from all prominent-looking buds along the whole length of the growths. I once produced a plant in three years from the cutting which had 100 heads of flower and grew to be 6 feet in diameter. Many more flower-heads would have formed, but quite one-half of the young shoots was pulled off as growth was starting so as to give the remainder strength.

Hydrangea paniculata is quite a distinct looking variety both in its growth and flower-heads, requiring different treatment. The best results are obtained in what is termed a moist holding loam. After flowering and when the leaves have fallen, at any time previous to growth starting again, these long growths must be pruned back to three or four eyes. Each long shoot is surmounted with a panicle of flower, the blooming season being the later summer months. This variety is readily increased from cuttings, these being formed from the portions of growth that are pruned off during the early winter. These should be cut into 6-inch lengths and inserted firmly in sandy soil in the open air. This, like the preceding, may be utilised for forcing. A. YOUNG.

Witley Court, Stourport.

Summer treatment of Arums.—I quite agree with all that "G. H. H." advances with regard to the summer treatment of Arums, viz., keeping them in pots in preference to planting out. After flowering, Arums require rest and an opportunity to ripen their tubers. This is given in the case of planting out by about a month's rest before being put in the open ground—in reality no rest at all. On the other hand, by being kept in pots and not over-watered, they are thoroughly ripened. By potting a few at a time through June, July, and even as late as August, a succession of flowers is obtained throughout the winter months. The tubers should be shaken out and potted up singly into as small pots as possible without crowding the roots, the lack of pot-room being compensated for by liberal doses of manure-water when growing freely. A batch of Arum Lilies in pots outdoors during the summer months is not a

very pleasing sight, as the leaves turn yellow and die off, but the tubers are ripening well.—C.

Carnations.—Malmaison Carnations are now in full beauty, and I saw a few days ago a splendid collection in the west country that was the picture of health and blooming freely. Many varieties of the Malmaison were represented, but the dark-coloured kinds lack much of the beauty of the old flesh-coloured and newer shell-pink varieties. Horace Hutchinson, which was lately shown at the Temple, gives promise of being an acquisition to the dark-coloured Malmaisons, being very broad of petal. The large yellow Cecilia, exhibited at the same show, was perhaps the most remarkable Carnation shown, being particularly fine and of good colour. Duchess Consuelo, a handsome bloom of the same tint, is also a splendid yellow, while Baldwin, soft rose, Daybreak, flesh-pink, Calypso, blush, and Mme. Thérèse Franco are all attractive varieties.—S. W. F.

Torenia Fournieri.—Where a greenhouse has to be kept gay with flowering plants throughout the season this *Torenia* affords a pleasing variety. It is a low-growing, much-branched plant, whose curiously-shaped blossoms are of various shades of lilac and violet. There is a second species, *T. Bailloni* or *flava*, whose flowers are yellow, thus furnishing a good companion to the first-named. Both succeed best treated as annuals—that is, sown in a gentle heat in the spring and pricked off as soon as they are large enough to handle. They may be either potted singly or three in a pot 5 inches in diameter, under which conditions they attain an effective size in less time than when potted singly. For an edging or such purposes 4-inch pots are sometimes the most useful, and in this one plant will attain to flowering size. A fairly open compost such as is suitable for Fuchsias and similar subjects will suit these *Torenia*s well. By varying the time of seed-sowing they may be had in flower at different periods, but for late autumn blooming more heat than an ordinary greenhouse gives is necessary. Another species, *T. asiatica*, is a stronger grower than either of the preceding and more woody in texture. It is best struck from cuttings and is very effective when grown in a suspended basket.—T.

Ipomæa Leari.—Though the blooms of many *Ipomæas* are very fugacious, such a succession is maintained that a display of blossoms is kept up for a considerable time. Blue flowers being so generally admired, those which are of some of the various shades of that tint are perhaps the most attractive. To this class *I. Leari* belongs, the large *Convolvulus*-like flowers being of a pleasing shade of lightest blue. It succeeds best in the temperature of an intermediate house, and is just now flowering in the Begonia house at Kew. The foliage, like that of several of its allies, is thin in texture and somewhat liable to the attacks of red spider, to prevent which a liberal use of the syringe must be resorted to. It passes the winter in a comparatively dormant state, starts into growth in the spring, flowers throughout the summer months, and then goes to rest. A very beautiful species which forms a succession to *I. Leari* is *I. rubro-cerulea*, which is of annual duration. The seeds should be sown in the spring, and, grown on freely in a greenhouse or rather warmer structure, they will commence to flower early in the autumn and continue for a couple of months or so. The cool part of the stove is, however, necessary during the flowering period. The flowers of *I. rubro-cerulea* are of a beautiful clear light blue, becoming with age suffused with purplish red.—H. P.

Tydas.—The quaintly-marked blossoms of these gesneraceous plants are more generally met with during the autumn and early winter months than at the present time, yet they may with little trouble be had now, and I recently saw several flowering examples that were very attractive, particularly at this season of the year. They had been ripened off somewhat earlier than usual last autumn, and were shaken clear of the soil and repotted early in February. Grown on

in an intermediate temperature they are now flowering freely, and will continue for a long time to come. The whole of these *Tydas*, or *Isolomas* as they are often called, will succeed with very ordinary treatment, all they need being in the autumn or winter, when the flowering season is over, that the soil be kept pretty dry, but not parched up, and then when intended to start them into growth the curious caterpillar-like rhizomes may be shaken clear of the old soil and repotted into fresh compost. These rhizomes should be about half an inch below the surface of the soil, which may consist of loam, leaf-mould, and sand. Where the plants are intended for late blooming they need not be potted till March, and may be grown during the summer in a cold frame. Propagation is effected by seeds, which ripen freely, by division, or by taking off the tops when about 3 inches long and putting them in as cuttings. Some varieties produce new rhizomes more freely than others, but in a general way this is the readiest mode of increasing any particular form.—T.

Acalypha Sanderiana.—Having given this plant a good trial, I am convinced of its usefulness. Although, like many other introductions, it has not found universal favour, where grown well it will always find many admirers. One great recommendation is that it will keep up a display throughout the year, being equally bright at Christmas as at midsummer. Another recommendation is that it can be easily propagated and attains to a useful size in a very short time. I now have plants which are not three months old about a foot high, with long crimson racemes from the base of every leaf. The chief points in the culture of this useful plant are first to secure strong cuttings. If the stock plants are weak, they should be potted on and treated liberally till they have made strong growths. Weak cuttings run up tall, but strong ones will flower from the surface of the pots. I like to put the cuttings singly into small pots, using a fairly rich open compost. They require to be kept close and shaded until they are rooted, which will not take many days. As soon as rooted round the pots they may be potted on into 5-inch pots and stood up as close to the glass as possible. This plant will make more rapid progress in a high temperature, but I find it can be grown well in an intermediate house and will make shorter jointed plants. A liberal supply of manure may be given as soon as the pots are filled with roots. Red spider is its greatest enemy. Plants get too tall in a comparatively short time, but as there is little risk in taking the tops off to propagate, young plants may always be had for succession.—A. HEMSLEY.

NOTES AND QUESTIONS.—STOVE.

Shading regal Pelargoniums.—As mentioned on p. 443, the blossoms of these remain fresh and in good condition much longer when shaded from bright sunshine than they do if fully exposed, yet the plants are greatly weakened if it is carried to excess. The dark-coloured flowers are much more affected by the sun than those of a lighter tint, the intense purple (almost black) of *Beauty of Oxtou* turning in a short time to quite a rusty hue. In the case of those with dark blotches on a white or light ground, it will be often found that the blotched portion is quite disfigured, while the light coloured part is uninjured. Not only does this apply to regal Pelargoniums, but to all the different sections, such as show, decorative, French, and fancy.—H. P.

The double Ragged Robin in pots.—At Hardwicke House, Bury St. Edmunds, I recently noticed a nice lot of plants of *Lychnis Flos-cuculi*, the double pink variety, grown in pots for conservatory decoration. For this purpose it is admirably adapted. I have grown it since it was sent out as a border plant, but, though it is very pretty and useful for cutting, it seems to lack something of boldness and is not altogether satisfactory. The Hardwicke plants are in 6-inch pots, and the pretty feathery spikes rise to the height of about 18 inches. They are covered with flowers which last well, and the plant is

certainly worth making a note of for the purpose indicated.

Pelargonium Mr. W. Bealby.—Although now some years since this was sent out—if my memory is not at fault it was among Messrs. Pearson's 1887 set—it is still one of the finest habited and brightest of zonal Pelargoniums, and I was recently reminded of it on seeing a large batch of it being used for bedding in a neighbouring garden. It must not be thought on this account that the flowers are not of a good standard, for there are few of the very newest that can beat it for size or shape, while as noted its habit is all that could be desired.—A GROWER.

ORCHIDS.

CATTLEYA ACLANDIÆ.

It is surprising how seldom one comes across good healthy specimens of this pretty *Cattleya*, and this is the more unfortunate when one considers how very distinct it is from all other kinds. Nor is it particularly difficult to grow provided a little thought is brought to bear upon it. The habit of the plant itself is in a manner a guide as to the kind of receptacle it will thrive in, its short bulb and roots pointing to quite a different mode of treatment from that followed for the labiate forms. In many cases growers have tried baskets for it and failed, but this is not the fault of the baskets. They are not sufficiently drained as a rule, and in consequence a lot of peat and Moss comes into contact with the roots, and this they are not able to push through. Had the baskets been filled to within an inch of the top rods with crocks and the remainder filled with compost, all would have been well, provided other conditions were favourable. Perhaps the best way to treat this plant is to place it on flat rafts or trellised blocks of teak. Sometimes it is inclined to ramble, and the blocks allow for this. Again, new compost can be given about the leads without disturbing the back part of the plants, and this is a great advantage, as the roots of *C. Aclandiae* greatly dislike being pulled about.

This system of adding to the compost piecemeal is a good one, and far preferable to overloading the roots, as described above, or of placing them upon bare blocks. I have seen healthy plants under the latter system where they had been very carefully looked after both as regards rest and atmospheric moisture, but in no case had they the same vigour and size of pseudo-bulbs or flowers as are produced when the roots are running in a little compost. Again, when the blocks decay, as they do rapidly in the moist heat of the Orchid house, it is very difficult to transplant the Orchid to a fresh piece without either leaving a lot of decayed wood in or damaging the roots badly. That the latter is injurious goes without saying, while decayed wood is the surest producer of fungoid growth known, and the latter is very destructive to Orchid roots. The most important point then in its culture is to secure a healthy lot of roots clinging to something of a suitable nature for their ramification and health. The question as to atmospheric treatment is more difficult to solve. While *C. Aclandiae* undoubtedly delights in warm, moist conditions, especially when growth is most active, there must be a kind of hardening or ripening of the growth going on at the same time, or else if the growth is soft and sappy, without due attention to this the flowers will be few and poor in substance and the plants very liable to be checked by any slight mistake in culture, such as a cold draught of air in winter or a little too much sun in summer.

The plant is peculiar in its seasons of growth and rest, and not at all to be depended upon. I have often known it to flower, say, in June and then grow away again and produce another lot of bloom in autumn, but I have never seen this class of plant keep so healthy as others that flower regularly and annually. The more light and air they are exposed to in autumn and winter the better, and with regard to root-moisture, this will depend entirely upon the state of growth, giving a full supply to healthy, well-rooted plants when growing freely, but less to those that are weak and when resting. The flowers of *C. Aclandiae* are very distinct from those of any other *Cattleya*, the sepals and petals being greenish yellow, spotted with deep purple, the lip, which does not enfold the column as is usual in *Cattleyas*, being bright rosy purple with deeper lines.

Aerides Warneri.—This is really a good form of *A. crispum*, the plant and flowers being almost identical, but the colour is quite distinct. It is not by any means common in collections, nor has it ever been since it was first imported by the late Mr. Warner. The flowers appear on racemes, each 18 inches or more in length, and are among the largest in the genus. The sepals and petals are almost pure white, having lost the rosy suffusion common to the type, while the lip is of a pretty bright rose-purple margined with white. It does well with other species in the East India house.

Oncidium cucullatum.—One of the prettiest varieties of this species I have seen is now in bloom. The sepals and petals are of a pretty soft purple-rose with quite a distinct narrow white border or margin. The lip is entirely white with the exception of rosy-violet spots at the base. Thus it comes nearest the *O. c. nubigenum* forms, but is superior to any of these I have seen. *O. cucullatum* is well known to be one of the most variable kinds in existence, and, being a native of high mountains in equatorial regions, is not easy to keep in health over a number of years. Very cool and moist conditions suit it best.—H.

Masdevallia Barlaeana.—Though not very large, the flowers of this species are pretty and bright, and it is certainly worthy a place in every amateur's collection. It is cheap and easily cultivated; the scapes are single flowered, of a very pretty bright red, and they are abundantly produced. The plants should be grown in medium-sized pots only, and these must be well drained, the upper inch or so being all that is needed for compost. Add plenty of rough broken crocks and charcoal to the peat and Moss, and place it firmly in the pots. Grow in a light, cool house, with ample light in winter, shading somewhat freely in summer.

Saccolabium ampullaceum.—The erect spikes of rosy carmine blossoms borne by this species are now very bright and effective, and though fairly common in collections, one does not see so much of it as of many other less beautiful kinds. Like others of the dwarf *Saccolabiums*, it requires careful culture, but there is nothing particularly difficult about it, and in a nice light position in a warm house where the growth gets well consolidated in autumn, the leaves will usually stand the winter all right. Weak plants kept in a very moist and shady house without due regard being paid to hardening their tissues in late summer and autumn often lose many of the lower leaves after a cold, dull winter. It should be grown in baskets of Sphagnum Moss and crocks only.

Dendrobium superbum.—The flowers of this species are not so bright as are those of many others in the genus, while the peculiar fragrance, though liked by some people, is distasteful to others. But a well-flowered plant is decidedly handsome, the blossoms occurring very freely along the upper part of the long vigorous stems,

their colour a deep purplish magenta. Owing to the length of these stems and the fact that the plants bloom somewhat later than most *Dendrobies*, the most favourable position in the East India house should be given it, or the growths will not be finished in time. A frequent cause of its not flowering freely is found in this backward tendency, for there is not time to get the stems really well ripened after they are grown. Otherwise the plant is of the easiest culture and thrives with the usual treatment given to the deciduous group.

Brassia Keiliana.—This species is noted for its variations from the typical form, very few being exactly alike in every particular, and I recently saw a very nice lot of varieties flowering at Mr. Bull's. One especially had deep sepia-brown sepals, the ends of which were contracted into bright golden yellow tails, a fine contrast against the deep brown being formed. *B. Keiliana* is one of the best of the *Brassias* and easily cultivated in a house kept at a medium temperature and nicely moist. The plants should be grown in pots of medium size, and the compost may consist of equal parts of peat fibre and Sphagnum. A very free moisture supply is necessary while growth is active, and even while at rest the plants must not be too much dried at the root.

Galeandra nivalis.—This is not a very common species in cultivation, but an extremely pretty one in which the white funnel-shaped lip shows up strongly against the olive-brown sepals and petals, the flowers occurring in terminal racemes from the erect stems. The bane of *Galeandras*, as of many other South American Orchids, is insects, of which thrips and red spider are doubtless the most troublesome, but if by careful fumigation and syringing these insects can be kept in check, little other difficulty will be found in their culture. Like the *Thunias*, they enjoy a constantly hot and very moist temperature all the time they are growing and until the tops of the flower-spikes are seen, but in order to preserve the blossoms, a cooler and drier atmosphere is necessary then and afterwards to induce rest. The usual compost of peat fibre and Moss suits them, with a little good fibrous loam for the strongest plants, but the pot must not be unduly large.

Epidendrum arachnoglossum.—The Spider's-tongue Orchid, as this species is called, is not particularly showy, but it is very interesting, and also remarkable for the time it remains in flower. Where a fair number of plants is grown the display goes on for months owing to the spikes following each other, these elongating individually and producing flowers towards the ends long after those lower down are decayed. There are good and bad forms of it, some having flowers of a bright crimson with yellow lip markings, others having blooms of a cloudy white with many intermediate shades. The best position for the plant is a light and well-ventilated part of the *Cattleya* house, where in fairly large pots it grows freely and flowers annually when strong enough. In a hot and very moist house with insufficient ventilation, though it may grow freely for a time, it is never really happy and often fails to flower. It is a native of the southern part of New Grenada, where it was found growing on a volcanic mountain by M. Ed. André in 1876.

Leptotes bicolor.—Few Orchids have received more names from our botanists than this, but the name so long in use in our gardens and nurseries is the best known and as good as any. The plant is flowering freely now in many collections, and its distinctness as well as its quiet beauty ought to ensure it more attention from cultivators than it receives. The plant has cylindrical leaves and stems only a few inches high altogether, and from the base of the former springs the flower-spike, containing one to four flowers, according to the strength of the plant or the individual growth producing it. The sepals and petals are white, the lip purple, with a white

border. *L. bicolor* thrives best in an intermediate house, and though not by any means difficult of cultivation, it is important that the roots are not surfeited with compost. The safest way to grow it is in shallow baskets suspended from the roof, these being well drained and rather small in comparison with the size of the plant. Equal parts of peat and Moss suit it well, and abundance of water is necessary during the growing season. In winter it should be kept well up to the light, as the young leads are apt to damp off. It was introduced in 1831 from Brazil, and first flowered in the Duke of Bedford's collection.

Saccolabium Hendersonianum.—The pretty rose-coloured flowers of this species are freely produced upon the short, erect racemes, making a very bright and beautiful little plant, worthy of being included in every collection. Its culture is not always attended with success, but some failures may, I think, be traced to keeping the plant in too moist and shady an atmosphere. Moisture it delights in, but all available light should reach the plant if it is to be healthy and flower freely. The plants like the buoyant brisk heat set up by closing early in the afternoon and raising the blinds after thoroughly damping down. The rising moisture keeps a film on the glass and prevents scorching, while the full sunlight reaches the plant from all sides. Thus growth is not only rapid, but it is hard and free-flowering, while if the roots are confined to small receptacles, these cling firmly and send up ample supplies of moisture which must be freely applied. It will thrive in clean Sphagnum Moss and charcoal or crocks without any other addition, and though not needing a long season of dry rest, may well have a limited moisture supply after the plants have finished growth for the season. The atmospheric moisture must also be reduced in dull or cold weather, a good minimum temperature being 60° in winter.—H.

ORCHID ROOTS.

THE various kinds of Orchids grown under glass in this country are remarkable not only for the great variety of their flowers, but also for the difference in the life and likings of the roots. I was rather forcibly reminded of this recently when repotting a lot of *Odontoglossum citrosum*. The roots of this species are much longer-lived than are those of many others in the same genus, though in outward appearance they differ but little. Plants that were imported about five years ago and placed in small pans had not only rooted well from the bulbs first formed in this country, but in almost every case these roots were alive and healthy. Doubtless had the plants been disturbed in the meantime they would have died, and this leads to the reflection that in many cases this species and others are disturbed a good deal oftener than there is any need of. Everyone with a little experience must have noticed that the roots of an epiphytal Orchid when once disturbed seldom obtain a fresh hold, though in a few cases they keep alive and produce new feeding points about their lower extremity. This Orchid in particular, if it has not grown out of its receptacle and has the drainage in good order, may with advantage be left for quite a number of years without disturbance. The plants will certainly flower more freely, and this, of course, is the end in view.

On the other hand, such free-rooting and healthy feeding Orchids as *Cypripediums* show by their improved appearance that fresh food in the form of new compost is quite to their taste, and though it is not always necessary to shake the old material entirely from the roots, the mere new compost that can be got about them the better. Again, we have a class of Orchid roots that, though disliking disturbance as much as any, yet, owing to their sensitive

nature, they abhor anything in the least close or sour about them, and in consequence they have to be frequently repotted or else grown on bare blocks, which is too poor treatment for them. Instances that occur to mind are the *Promeneas* as a whole and many of the smaller growing *Zygopetalums* and kindred plants. They differ from such true epiphytes as *Phalenopsis* and the small *Angraecums*, for instance, whose roots, could they be assured of moisture in plenty, show their great affinity for bare wood by clinging to it firmly. The singular wiry roots of *Ceologyne cristata* and some of the *Gongoras* again seem capable of taking care of themselves in a remarkable manner, and if they cannot find exactly what they want, make the best of what is nearest. They will run about on a moist pot surface quite exposed or burrow into several inches of compressible material, whether this is peat, loam, leaf-mould, Moss or what not. They may not be long-lived in some of these substances, but they are among the most able to take care of themselves in the whole Orchid family, and in the event of their disturbance the plant feels the check badly.

I recently gave my ideas upon the subject of the failing of Orchid roots, especially those of *Cattleyas* and *Laelias*, in answer to a correspondent, so it is not again necessary to allude to this. The study of Orchid roots as a whole and their variety and adaptability or otherwise to various circumstances are extremely interesting and instructive. Any Orchid-growing readers who have noted peculiarities in the plants under their charge may mention them with advantage.

H. R.

Lycaste Deppei.—This old species varies a good deal, and some of the forms are much prettier than others. At Hardwicke I noted some very well-flowered plants of a nice form, the sepals broader than usual, light emerald-green with the usual purplish spottings, the petals pure white, and the lip entirely golden yellow spotted with bright red. It is singular that this plant has been let go out of cultivation, or nearly so, for it is well worth growing for cutting. A cool house and a compost of light loam, peat fibre, and chopped *Sphagnum* suit it well.—H.

Odontoglossum polyxanthum.—This is one of the *Odontoglossums* that are often very disappointing to buy except in flower, as the forms vary so, and anyone seeing a good form of it at a show or elsewhere may on ordering it get an entirely different flower. Many are in the habit of purchasing either newly-imported plants on the chance of getting good forms or else selecting from a collection in flower, and unless one has full confidence in his nurseryman, either of these methods is preferable to buying promiscuously. A good form of *O. polyxanthum* bears long arching and branched spikes, the individual flowers upwards of 3 inches in width, yellow, variously blotched with brownish red and other tints of the same colour. Others there are with narrow-petalled flowers less than 2 inches across, very dull in colour and unattractive. Its culture does not differ much from that of *O. Halli* and other species from Ecuador, the plants delighting in a cool, moist, and shady house in summer with abundant root moisture as long as growth is active.

Masdevallia nycterina.—In habit and some other characteristics this plant is a good deal like *M. Chimera*, and, like it, thrives well in wood baskets with an open bottom and large pieces of charcoal placed on the rods, so that the spikes can find their way down easily. Although when growing in pots most of the spikes may push up and find the light, yet the plants have a much more natural and pretty appearance when these are hanging about the basket as indicated. Like all of this section, *M. nycterina* is easily in-

commoded by stale or decayed compost, and it shows a decided liking for clean *Sphagnum* Moss and charcoal, so when making up the compost let this be freely added, and never allow the roots to get into a bad state before renewing it. The plants can hardly be kept too cool during the summer months, and where the *Odontoglossum* house is always kept as high as 50° during the winter nights, this is the best place to grow it. But where the *Odontoglossums* are kept cooler than this—as they unfortunately are in many places—the *Masdevallia* should be removed to a slightly warmer house in November. The flowers are produced on single-flowered scapes and are of the usual singular shape, principally tawny-yellow in colour.

Aerides crassifolium.—Although one of the commonest, there is no doubt this is one of the finest *Aerides*, and the large semi-drooping spikes of rosy purple flowers are very beautiful. On the front lobe of the lip in good varieties the purple-crimson tint is as fine as in some *Cattleyas*, the graceful habit of well-grown and well-leaved specimens being also very much in its favour. Although of the easiest possible culture, the true beauty of these plants is soon ruined by carelessness to their wants atmospherically, and quite recently I saw what must have been fine specimens quite ruined by having been kept in a dry



Flowers of the Horse Chestnut. From a photograph sent by Mr. T. O. B. Norman, Holly Hill, Ditchingham.

and draughty house. The plants like plenty of head and elbow room and large pots or square baskets filled with *Sphagnum* Moss and crocks or charcoal. In these they may remain undisturbed for many years by simply top-dressing once a year. Fine specimens are assured if the offsets at the bottom of the plants are allowed to remain and extend at will, and these have a much nicer appearance than single-stemmed plants, besides flowering more freely. The plants should be always in the East India house, and during the time the roots are active abundance of water is required. While at rest give less, but avoid drying them off.

Ceologyne pandurata.—The singular contrast of colour in this fine species makes it a very distinct and beautiful Orchid, and when it is well grown, with large spikes containing a dozen or more of its remarkable flowers, it is a very showy one as well. The latter issue horizontally, and the sepals and petals are a deep emerald-green, the fiddle-shaped lip, from which the species takes its name, being marked with several black raised ridges, which show up remarkably well against the green of the outer segments. *C. pandurata* likes a very brisk, moist temperature, and though doubtless it may be easily overdone with sunlight, too much shade is not conducive

to freedom of flowering. The pseudo-bulbs occur on rambling rhizomes, and this necessitates a rather large receptacle for its roots, such as large trellised blocks or baskets, over which the rhizomes can extend at will, and a rough and very open description of compost. It is rather a thirsty subject, and delights in ample supplies of moisture nearly all the year round. This may in part be gathered from the fact that the locality in which the plant grows naturally is under water during some parts of the year, the plants growing on the tree trunks in the most swampy part of Borneo.

NOTES AND QUESTIONS.—ORCHIDS.

Trichopilia tortilis.—There are several forms of this pretty old species all more or less distinct, including the rare white form *T. t. alba* and many fine colour varieties. *T. t. virginalis* is a very chaste and beautiful form I noticed recently flowering with Mr. W. Ball, of Chelsea. In this the usual twisted petals were prettily shown up by a quite pure white lip, a novel and pretty effect being produced.

Oncidium carthaginense.—In this we have one of the finest of the *Oncidiums*, bearing long spikes of small flowers. I have had spikes several yards in length. The little side branches may with a little skill be very effectively employed in almost any kind of decoration. In its strongest state *O. carthaginense* produces immense leaves, these being deep green, spotted with dark purple. It likes ample warmth and light, thriving well in the warmest part of the *Cattleya* house if given a rather thin layer of peat and *Sphagnum* Moss.—H.

GARDEN FLORA.

PLATE 1230.

INCARVILLEA GRANDIFLORA.

(WITH A COLOURED PLATE.*)

This plant flowered for the first time in a greenhouse at Kew in June last year, as was recorded in *THE GARDEN*, vol. liv., p. 431, where a plate of *I. Delavayi*, with an account of the genus, was published. A comparison of the two species shows a close relationship between them, the differences being in the shorter leaves, rounded leaflets and shorter flower-scape of *I. grandiflora*. There are also differences in the flower characters, but in a general way the two species are alike, and therefore of probable equal value as garden plants. Of the value of *I. Delavayi* it is now scarcely necessary to speak; it has proved a useful pot plant for the greenhouse, good plants of it being in flower in a greenhouse at Kew now. It is also an excellent border plant for a cool conservatory, as is proved by its behaviour in the Himalayan house at Kew, where a number of plants are in vigorous growth. As a plant for the herbaceous border in the open air in summer it has been again and again shown to be a worthy addition. So far as I can make out, *I. grandiflora* will be equally serviceable. The Kew plant of it has not been tried in the open air, but it has grown well and flowered freely both in a pot and in a border in a sunny, cool greenhouse. For the discovery and introduction of this new addition we are indebted to the expedition to Tibet and Western China by Prince Henry of Orleans in 1890, and to Messrs. Vilmorin and Co., Paris. It was pointed out last year that *I. grandiflora* may be only a form of *I. compacta*, discovered some years previously in Kansuh. Dried specimens of this species show it to be very free flowering, as many as a dozen flower-scapes springing from a single tuft of leaves. Should these two prove to be identical, then in *I. grandiflora* we

* Drawn for *THE GARDEN* by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



18

have a plant of quite exceptional beauty for the garden. The yellow-flowered species, similar in all characters except colour to that here figured, and which was found at the same time, has not yet found its way into English collections. It is, however, said to be in cultivation in France. W. W.

PARK AND WOODLAND.

THE HORSE CHESTNUT.

WITHOUT doubt one of our most beautiful flowering trees, the Horse Chestnut is, however, an almost perfectly worthless timber tree. The soft wood may be used for a few common carpentry purposes for which several other kinds of timber are better adapted, but it is certainly not worth growing for timber, and it is one of the worst trees that can be intro-

duced into a mixed plantation. Owing to its power of enduring shade and the stiff horizontal spread of its branches, it destroys all other trees near it, and no vegetation of any kind can exist under its branches. This is my experience of the tree wherever I have seen it in woods. As for timber merchants, they will not look at it. For windfalls an odd tree or two may be smuggled in among other kinds, but no one thinks of mentioning it in lots for sale except among the "mixed." I had once to look over a young plantation about thirty years of age that was in an unsatisfactory state owing to the indiscriminate nature of the mixture of species of which it was composed—one of the faults of our home forestry—and found that the chief offender was the Horse Chestnut, which had been used in the same proportion as the others and had usurped far more space than it was entitled to. Even gamekeepers complained of the wood because of the nakedness of the ground under the Chestnuts. The remedy adopted was the removal of every

Horse Chestnut in the plantation and filling the spaces up with Beech as an under-plant. The Beech itself is a bad neighbour in a mixed wood for the same reasons as those given against the Horse Chestnut, but when planted in an established wood (after the other trees have attained height) on the "uneven aged" principle adopted on the Continent, it is not so much to be feared, and it will grow in the shade as a straight pole, as few other species will do. If anyone will examine a Horse Chestnut growing in a plantation at this leafy season of the year they will be struck by the density of its foliage and shade, and the persistent way it pushes out horizontally and crushes other trees near it.

I have often wondered how the prejudice in this country against the seeds of the Horse Chestnut has originated. The schoolboy who hunts sedulously for wild fruits of all kinds prizes the nuts of the Spanish Chestnut, but



The Horse Chestnut.

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will not touch the Horse Chestnut, and cattle-feeders shun it as a food for stock. Yet cattle, deer, and sheep eat the nuts when they can get to them, and deer bark the tree and eat the leaves. On the Continent Horse Chestnuts are used extensively as food for cattle, sheep, pigs, and poultry. They are said to improve both the yield and flavour of milk in cows, and are given to sheep crushed in the same way as artificial foods are given to cattle in this country. Rooks are no mean judges of good food, and, according to Mr. R. Ellison in "The Berwickshire Naturalist," they carry off the Horse Chestnut seeds as soon as they are ripe.

For ornamental planting there is no finer variety than the common Horse Chestnut with its creamy white flowers and luxuriant habit of growth, and the red variety is also fine, but if anything it is a worse neighbour in a plantation than the other, being of a very stiff, aggressive habit. There is also a semi-double variety, but the single varieties are the freest flowerers.

J. S.

CORSICAN AND AUSTRIAN FIRS.

EVEN Dr. Schlich, in his carefully selected list of timber trees, omits the Corsican, giving the Austrian only a place as the *Pinus Laricio* of Poir. As forest trees no greater mistake could be made than that of confounding the two as the same or even similar. At one time the Austrian used to be commonly substituted for the Corsican for general planting, causing much disappointment in many cases, and such mistakes are committed yet. Botanically, I suppose the two varieties are identical, but as forest trees they are thoroughly distinct, and in all respectable nurseries the two have been carefully separated and may now be had quite true. The Corsican can be told from the Austrian at a glance, either as a single tree or in the nursery quarter. The Corsican is a truer and more fixed form than the Austrian, everywhere distinguished by its more rapid height, growth, longer nodes, thin, cylindrical habit, sparse branches, comparatively glaucous twisted leaves and general uniformity of habit. Lastly, it has a fault that the Austrian has not got: it is a bad transplanter unless moved early in autumn or late in spring; whereas young and old Austrians up to 10 feet in height may be moved with impunity, and I have transplanted many such. The Corsican Fir may be regarded as an ideal timber tree, because it grows very fast in almost any soil and situation up to a high altitude; increases in bulk of timber much faster than the Scotch Fir, which it equals in quality of timber, and, owing to its thin habit, will bear crowding well, producing probably the cleanest trunk among all the Firs except the Larch. Last, but not least, rabbits will eat it, but they do not like it, and in a mixed plantation they will clear off any Scotch and Austrian Fir first before beginning on the Corsican. These qualities constitute a difference that botanists ought to take notice of.

As to the Austrian, trees of the true type grow nearly as broad as high, but they vary prodigiously, hardly any two trees being quite alike. Indeed, the Austrian is the most variable Fir I know of. Its most valuable quality is its dense bushy habit, which renders it valuable as a shelter tree; there are indeed none better, only it grows rather slowly. As a timber tree it is rough and knotty. Its stiff horizontal habit makes it also a bad neighbour in a mixed wood, so much so that I have long ceased planting it except at the margins. Wherever an Austrian is planted in a mixture of Scotch and Corsican Firs, there you will find a depression in the plantation owing to the slower growth of the tree, which also occupies more than its share of space. It is not apt to be smothered because it pushes its neighbours back laterally and occupies far more space itself than it is worth. Planted by itself as a timber tree it behaves better, but it is very long in shedding its lower branches, which are thick and stiff, and I know where many ugly examples of this kind could be found. Some years ago a gentleman engaged a nurseryman to plant a large tract of Corsicans for him, and some years after asked me to see them. As far as I could see, there was not one Corsican in the lot, the Austrian having been substituted, and the crush among the trees was such as I have never seen in any pure plantation.

J. SIMPSON.

Wortley.

THE FORESTRY QUESTION.

THE following extracts from a letter from M. David Cannon, of Les Vaux, Loir et Cher, France, will, we think, prove interesting to our readers at a time when forestry is engaging so much attention:—

The "natural regeneration" system, imported all of a piece from Germany some seventy years ago, applied by means of successive cuttings at an age fixed arbitrarily beforehand, is very much contested now-a-days. In mountain Fir forests the superiority of *jardinage* as modified by Gurnaud—frequent and prudent thinnings, always leaving trees of all ages on the soil—is, I think, fully proved. On the other hand, in Oak forests in the plains of Normandy, a State forester, M. Prouvé, observes that it is better and cheaper when trees are mature to cut down the whole crop slap and plant. The reason in both cases is that years of abundant seeding are irregular; that three to six years may elapse before a good one; that during that time, in fertile soils especially, the soil gets occupied by grass, Thorns, Heath, &c., which choke the seed and it becometh unfruitful, or smother the plants as they come up. Then the trees left as *porte-graines*, suddenly isolated, get blown over. Of course, there are parts and times where natural seeding does very well, but the defect of government regulations is to impose uniform treatment everywhere, so I very much doubt whether so-called scientific forestry is of much use to us poor private woodmen.

Brown, with all his faults, has the great merit of inculcating careful thinning. Would you believe that the scientific continental authorities are much behindhand on that question; that they are only beginning now to acknowledge it in a very half-and-half sort of way? They used to talk a deal of rubbish about struggle for life between the young trees and natural selection, the result being that they all grew up lanky and weakly and lost a long time before they could get stout again. With early and rational thinning it is admitted now that a valuable crop of trees can be got in two-thirds of the time imposed by regulations till now. I have just been through Southern Germany, and the woods I saw from the railway—mostly Pine—struck me as much too thick and suffering from their close state. I have certainly much better growth here on my poor soil. They seemed to be private property, but I am told State forests are no better. In Austria, especially in the Tyrol, where the woods are mostly Larch and Spruce, they are, as far as I can see, kept thinner and better managed.

THE WEEK'S WORK.

HARDY FRUITS.

SUMMER PRUNING.—Shortening the growth of all trees which are trained in the various forms of wall trees, pyramids, espaliers, and the like is a necessary part of the season's work, and the time has now come for extensive operations in this way, for there will now be no fear of the shortened shoots breaking into growth from the back buds and throwing the trees out of gear. If my former advice has been carried out, all that will have been done in the way of restricting growth will have been the removal of some of the crowded shoots while in a very young state and the stopping of any very strong shoots that promised to destroy the balance of the tree, the only exceptions in which an earlier application of more wholesale stopping was advised having been in the case of cordon Apples and Pears on dwarf stocks. The danger of these breaking too freely into second growth is eliminated by the action of the stocks; therefore it is safe to deal with them earlier, and less wasted growth is made. No hard and fast lines can be laid down as to the proper number of leaves which shall be left on each shoot at the summer pruning, as this will vary with the individuality of the trees, but as a general rule for guidance it may be said that

not less than five leaves should be left on a shoot, and if the tree is naturally a strong grower, more still should be left, so that there shall be plenty of good leaves to carry out their own particular functions in bringing the fruit to perfection and plumping up the buds for next year's crop. Trees that have reached their limits of space may have the leading shoots of each branch shortened in the same way as the side shoots are treated, but where further extension is desired, I prefer for the present to let these shoots grow to their full extent and fasten them to the walls or to some support. The foregoing remarks apply equally to Apples, Pears, and Plums, except that perhaps it may be advisable to lay in to full length a few shoots of the latter where room can be found for them, it being found advisable to provide these trees with new wood from time to time.

CHERRIES.—As soon as the fruits are picked I like to do to the sweet Cherries whatever pruning may be necessary for the year and to let it be as little as possible in every case, for Cherries abhor the knife and are still more liable to be injured by its use in winter than in summer, gumming being much more prevalent after pruning in winter from the action of cold on the newly-cut surfaces. Excepting those trees grown in bush form, which should have the points of the shoots pinched out now, summer pruning is not applicable to the Morello Cherry, which bears its finest and best fruits on the young wood. It may be advisable to thin out the wood, removing a few of the surplus and weakest growths altogether, but more than this should not be done, and it may also be borne in mind that the Morello as a wall tree will bear to have its wood laid in more thickly than almost any other fruit tree without injuring it in the least, so it is wise not to overdo the thinning at present. The growths ought to be secured to the wall either by thin twigs stuck at each end behind the branches and holding back some few shoots, or by tying back with raffia. The former is an old-fashioned method, which has the advantage of being efficient and quickly done, and it is applicable also to other wall trees, such as Peaches and Nectarines, which are not shortened back during summer.

APRICOTS.—Old established trees should be looked over, and the growths being made from gross shoots stopped earlier in the season may now be pinched hard, as no harm will accrue by so doing; the fruits will get more light and a better balance be maintained. Lay in here and there a few shoots of full length to fill up any gaps as advised in the case of Plums. Where field mice are plentiful, these little pests will be sure to find out the Apricots; therefore, trapping, as I advised some weeks back, must be persisted in, not only in the neighbourhood of the trees, but in all likely haunts around the garden. Young Apricot trees should be allowed more freedom of growth than those older trees above mentioned, and well placed shoots should be encouraged. See that the trees get plenty of water almost up to the time of the fruit ripening, as it will be better to withhold anything like heavy soakings while ripe fruits are on the trees.

GENERAL WORK.—Undoubtedly one great point to be always striving for in dealing with hardy fruits is cleanliness of the trees, and to this end it is necessary to be ever on the alert with the syringe or garden engine and frequently with insecticides; at any rate, the latter must be at hand to deal with the sudden appearance of some members of the aphides. Trees may be apparently clean to-day, while to-morrow sees them with perhaps what one thinks lightly of as "a touch of fly." A day or two more of letting them alone and the trees are filthy, smothered with insects insignificant individually, but collectively an abomination. I have found the present season one of the worst I have known for aphides, black and green, but they must be fought vigorously and often if the trees are to do well. Perhaps one result of the constant deluging will be to keep red spider at bay, and that will be something to be thankful for.

CORNUBIAN.

KITCHEN GARDEN.

LATEST CELERY.—Where rain has fallen it will be well to plant out late-raised Celery. If the plants were pricked out in sheltered nooks or corners as advised and kept well moistened, growth will by this time be strong and robust and not liable to run to seed. Provided the autumn is fine, this extra late batch will often grow to a respectable size quite fit for table use and the salad bowl. At any rate, it will be useful for soups and flavouring, the main lot being reserved for ordinary table use. The trenches need not be quite so deep as usual and the plants may be placed a little closer together. Planting completed, lay a good mulch of spent Mushroom manure down each side of the rows and give a thorough soaking with water. If ordinary weather follows, it will then take care of itself until the sticks are freed from suckers and the first earthing-up is given. If, as advised, Leicester Red and Standard-bearer were sown, very few of the heads will be likely to rot if the winter is wet, as, brought on under such exposed conditions, their constitution is so hardy.

COLEWORTS.—The present is a good date to make the first sowing of the useful London Colewort. Get the seed from a good firm, as I have met with some very inferior strains of this vegetable which run into a coarse, flavourless growth. A south-east or east border answers, except in particularly dry, hot soils, when a north aspect is preferable. Here, if kept comfortably moist, the plants will come on gradually but surely. I simply mark out the beds, sow the seed broadcast, scuffle it in beneath the surface with a small-toothed rake, and finally tread and rake level. I find it safest to net my Coleworts over as soon as sown, as if this is postponed the seed sometimes comes through without being noticed, and the chaffinches take all the plants. I sow on July 7 and again on July 15 or 20, the latter sowing sometimes proving the more serviceable if the autumn is warm and moist and the first batch grows away too freely. Many gardeners do not grow Coleworts, but all should do so, as nothing equals them for hardiness or surpasses them for flavour.

CUCUMBER HOUSE.—Plants which have been yielding fruit since March will in many instances show signs of partial exhaustion, and should be treated accordingly. Provided others either in houses or pits are yielding freely, the first-named batch should have a partial rest, that is, if they are to be retained throughout the season. Thin out the growth freely, leaving only that which is more robust and free from spider. Give a good rich top dressing and assist root-action by occasional doses of liquid manure the colour of pale ale. Syringe regularly and copiously, close early, allowing no fruit to form for a fortnight or so. If a little freedom of growth is allowed instead of close tying in, it will assist the plants to grow out of their weak state, and tying in can again be resumed when fresh fruits are allowed to swell. Perpetual is a first-rate Cucumber either for house or frame work, having a grand constitution, the fruits, which are borne in great numbers, being of good quality. In surface-dressing use plenty of opening material, such as old mortar rubble, so as to allow of superfluous water passing quickly away. Cucumber plants are often exhausted by the fruits remaining on them too long, thus robbing them of their vitality. The fruit should be cut as soon as ready and placed in cool quarters, the stem end being laid in damp Moss. Old Cucumbers should not be used in the salad bowl, as they impart a bitter flavour and are unwholesome.

BLANKS IN WINTER STUFF.—In consequence of the drought experienced in some gardens, a good many blanks will have occurred in quarters of winter greens, especially Brussels Sprouts, these often suffering from the disease known as finger-and-toe. The foliage then quickly assumes a sickly bluish colour and the top becomes infested with insects. These gaps should now be made good from the seed-bed, and if the young plants are at all overgrown, take out a good-sized hole and make the soil about the roots firm, also well soak the plants the

day prior to lifting them. They will then stand a chance of making headway. It is next to useless pulling up those extra large plants from a dry bed and planting with a dibble, as thus treated all the principal fibrous roots are snapped off. Of course, where any extra late sowings of such things were made, the plants from these beds may be used, as with a fine autumn they will yet make good-sized stems and prove of extra value by reason of forming their sprouts later. If any healthy plants of Broccoli, such as Methven's June or Late Queen, are still in the seed-beds, they may be planted on a north border, if such is at liberty, from which some other non-improving crop has been taken, no turning up of the ground being advisable. In such positions Broccoli sometimes stands the winter better than in more open ones, the hard root-run favouring a firm, frost-proof growth. J. C.

KITCHEN GARDEN.

CONSTRUCTING AND HEATING EARLY TOMATO HOUSES.

It is useless attempting to produce early Tomatoes in insufficiently heated, badly-ventilated, leaky houses. As well might one attempt to grow early Cucumbers in such. I maintain that no indoor crop pays better for any outlay in the erection of a suitable house than Tomatoes, this holding good either from a private or market grower's point of view. Houses in which it is possible to husband every possible ray of sunshine through January, February and March, furnished with abundance of hot-water pipes, with ventilation on the most approved principles are absolutely indispensable if even fair results are to be achieved. I consider front air advantageous, as when the plants are in flower, even in the early months of the year, a chink on the front ventilators aids in producing a buoyant atmosphere, so essential for setting the fruit. The roof should have a rather sharp pitch, and sliding ventilators should be fixed in the brickwork. The bed for the reception of the plants should be within a short distance of the roof-glass, as stocky a growth as possible being desirable from the very first. The need for the existence of plenty of hot-water pipes lies, not in the great amount of heat needed by the Tomato, but in the fact that the night temperature needed for setting the fruit, or say 60°, must be maintained without unduly heating the pipes. A genial, somewhat arid atmosphere is what is wanted. I do not approve of open water tanks in early Tomato houses, the object being to secure a moisture-free atmosphere. Watering the plants will supply quite sufficient atmospheric moisture to support growth and fruit. Of course, every possible convenience will not secure success unless cultural details are attended to. Very narrow, shallow ridges of soil, or, if grown in pots, those 9 inches in diameter, will hold sufficient compost for the support of extra early plants, provided judicious feeding be practised when the crop tells upon their energies. This should consist of loam pure and simple, kept open with old mortar rubble, firm ramming being practised. Then a good deal depends on varieties. A market grower recently informed me that the varieties which set their fruit freely in wet weather were few in number, and the same may be said of the early comparatively sunless part of the year, February and March. My choice would be Ladybird and Up-to-date for principal batches, with a less number of Early Ruby and Earliest of All. Were the fruit required for cooking only and I could guarantee

a true stock, I would grow largely the old dwarf Orangefield. NORWICH.

Early French Beans.—My first gathering in the open was made on June 24, quite a fortnight later than usual. This has necessitated growing a much later supply in frames or houses than usual. To have French Beans, say, from February to midsummer under glass entails a lot of labour, and the outside crop is a relief, so that I always endeavour to get an early supply from plants raised under glass and planted out. Plants raised with as little heat as possible do so much better than those raised otherwise. Few plants suffer more from cold and too much moisture at the start. My earliest dwarf French Bean is Early Favourite, a fine forcing variety with a good-sized pod.—G. W. S.

Lettuce Continuity.—I find this the most reliable of all in dry, hot seasons and in a light soil. I note at p. 402 "J. R." says Continuity is much over-praised. I have failed to find it as poor in quality as "J. R." describes, and I think in some cases the quality may be influenced by the soil, which if at all poor will affect the quality. I have tried most of the Lettuce catalogued. Having a very light soil on gravel, and needing very large quantities of Lettuce daily and for use in June and well into August, the above variety has proved the most valuable. Another variety named Marvel, a red-edged kind, is my next best. This hearts well, and is valuable on account of its standing so long before running to seed. I need Lettuce at the rate of several hundreds weekly, and these must have good hearts in the hottest weather. The Cos varieties find little favour in my case. The most reliable are the dark coloured Cabbage varieties. The colour may be objectionable to some, but as the hearts are well formed, the colour is very slight. I find no difficulty in providing a succession when such kinds as Marvel and Continuity are grown for summer use.—G. W. S.

Self-protecting Broccoli.—For late use to succeed the Autumn Giant and Walcheren Cauliflowers, none that I am acquainted with can equal Veitch's Self-protecting. The sooner now the first batch of seedlings is put out the better, and if a second sowing has not been made, the smallest plants may well be pricked out in a nursery bed and finally transplanted three weeks hence for succession. Plenty of room must be given as the variety is a very strong grower, and the soil must be rich. There need be no fear of overdoing it in this respect, as those plants which have not furnished heads when frost comes, will have to be lifted and laid in shelter. Some gardeners grow this Broccoli in trenches and doubtless such treatment ensures large succulent heads, as when once the roots get thoroughly well moistened it is a comparatively easy matter to keep them so by occasional doses of liquid manure. See that the seed bed is well moistened the day previous to planting, or many of the best plants will snap off in drawing them. Examine the plants as sometimes there is a percentage of blind ones, and shade if but with evergreen boughs.—N. N.

Early Broad Beans.—The seed sown in the open in November or early December was badly cut by the severe frost and cold winds late in the spring, when most growers hoped their troubles as far as the frost was concerned were at an end. Even with these drawbacks I am a strong advocate for autumn sowing of the above, as, provided a strong plant is secured, it is surprising how soon the plants pull through as the stem-growth is uninjured. Plants raised under glass were this season quite ten days later than those sown in the autumn, as planting-out was later than usual. My autumn-sown plants gave dishes the first week in June, the variety being Early Longpod, whereas the same variety was not ready till the 17th sown under glass. I am aware such kinds as Dwarf Gem and Early Mazagan are recommended for first supplies, but I have found Longpod equally early. These give larger pods

and a heavier crop. By growing a fair-sized podded variety in preference to the Mazagan a few days in earliness are gained, as the larger-podding varieties may be gathered earlier. A white-seeded variety of the Longpod is excellent, as, while giving a good-sized pod, it is remarkably early and of excellent flavour. Given frame protection, I find there is a great gain in sowing in 4½-inch or 6-inch pots, three seeds in the former and five in the latter. I prefer sowing sufficiently early so that it is not necessary to use much heat; indeed, none at all is best, as, given cold-frame culture, the plants do better when planted out. The plants, after the flowers have set and been topped, may with advantage be given a little quick-acting fertiliser in showery weather. I find pots preferable to boxes, as with the latter the roots are broken in planting out.—G. WYTHES.

Potatoes.—The weather during the past spring has told very unfavourably on Potatoes, it would seem, in market as well as private gardens, both in the size of the tubers and extent of crop. The Cornish Potatoes were, so far as I could see, very much under their usual size, which is probably attributable to the frost, which, in some districts at any rate, was said to have blackened many acres. Not only have they been small, but late, and the quality very poor. Many even small tubers when cooked had a bad taste. It is only within the past few days, or since the middle of June, that Potatoes have been really good, and even now their size falls short of the average. There are, of course, two reasons which easily explain this, namely, the extremes of heat and cold, which will make the season a memorable one. Since the rain which occurred on the 18th and 19th ult. Potatoes have shown much improvement in growth, though many of the early section growing in light soil are fast ripening, and had almost passed the stage for obtaining benefit from the rain. Another remarkable feature connected with early Potatoes is the early date at which disease has appeared in the tubers. In the haulm no trace has been noticed, but many tubers when lifted have been found to be affected. This early disease must be attributed, I think, to the cold and variable weather. Many complaints have been made of the broken and uneven rows of Potatoes. Plenty of sets never developed a leaf, but tubered slightly under ground; others came very weak and late. In my principal breadth of Snowdrop and Beauty of Hebron there were so many failures that I had to fill the extensive gaps. What the ultimate results may be cannot yet be estimated, but certain it is that in my case I have never before had such uneven growth in midsummer as this year.—W. S., WILTS.

WINTER AND SPRING CARROTS.

I HAVE no admiration for the large, long, huge roots often displayed in shop windows and at times often too frequently at shows and given first prize. It is not possible to buy at all times sweet, freshly drawn small Carrots. It may be asked, why divide the two into winter and spring supplies, because to do this means two distinct sowings. In a private garden I fail to see what need there is for large, coarse roots. In these days, when good vegetables are appreciated, I do not think Carrots of the Altringham and Long Red Surrey types are so useful as the Intermediate and the Short Horn section. From June to September, or say October, there should be no lack of excellent young roots drawn from the soil. My method is to continue the supply. To do this scoring will not be needed. So far I have found the Carrot quite hardy. I am aware it is very much subject to attacks of wireworm, slugs and snails, but to grow winter and spring roots the land must, if at all infested with the above, of which wireworm is the worst, have a thorough dressing. I use gaslime freely and escape injury. There are other aids, such as soot, fresh lime and salt. The seed of roots that are grown for winter use in the ordinary way is usually sown in April or even earlier to get a long season's growth.

These are lifted in October, and this supply is supposed to last from six to seven months, but the roots are poor in quality when kept so long. Carrots are much better left in the soil, as after being lifted they grow out badly and lose flavour. A great deal depends upon the store and size of root as regards keeping and quality.

I advise sowing for the early winter supply early in June, say from the 10th to 20th, or even earlier in cold soils, sowing such kinds as the Intermediate or Model. The Nantes and Short Horn in poor or heavy land are good, and these will give good material from September to December. In a light soil I find it well to sow at the date named, and again a month or six weeks later for the spring supply. It is important that the ground be well prepared. I advise an open border in no way shaded by trees. By all means avoid thick sowing, especially for the latest lot. For the early winter supply a well-manured quarter is advised, as growth must be quick, and if the season is dry, the manure will retain the moisture. Should there be any difficulty with fly, I water in the evening and dust with fresh soot. Ample space should be allowed between the rows—15 inches at least. This allows of using the hoe freely, and thinning as soon as the plants can be handled is necessary. Carrots grown thus need less thinning than larger kinds, as it is an easy matter to thin out for use as needed. The early winter roots last well into the new year, and these may be drawn at all times. Of course, in hard weather, with the ground frozen, this would be out of the question, but it is an easy matter to lift a row or two, place close together, and cover with long litter. For the spring supply I do not manure other than with a fertiliser just to give a start, as size is not needed. In a very dry season sowing may be deferred a short time. I find wood ashes or burnt refuse a splendid fertiliser, as it keeps the land sweet. For this purpose an open quarter and sowing in July or early August are advised. These roots will not be large, and they will be good from the early part of the year till the end of May.

G. WYTHES.

Asparagus Purple Argenteuil.—I have a very high opinion of this variety, it being of special value where a prolonged supply of this delicious vegetable is needed. It fully merits the title late, not because it is later than such sorts as Battersea, Conover's Colossal and Reading Giant in starting into growth, but by reason of its continuing to throw up good usable grass over a longer period. Under good culture it produces large heads of a delicate purple colour. Those who purpose increasing their stock of Asparagus next season will do well to procure this variety, taking care to order it from a reliable firm.—B. S. N.

Early Beet.—It sometimes happens that the stock of Beet stored away in autumn runs out sooner than one has bargained for, and when this is the case it is advisable to get roots along from the spring sowing as early as possible. I think Early Red Globe about the best variety for the purpose. It is after the style of the Turnip-rooted Egyptian, but the foliage is stronger and the root is formed rather more quickly. From seed sown April 7 I was pulling this year by the middle of June roots a little over 3 inches in diameter and as much in depth. It is also very good in quality. The Turnip-rooted Egyptian comes close behind it and is also an excellent Beet for early work.—C. E. S.

Cabbages in November.—In some gardens Cabbages, either in ordinary hearting or sprouting form, are expected all the year round, and the present is a good time to sow seed of some small quick-maturing variety for use during November. These come in just before the Rosette Coleworts, which are not at their best until they have had a few frosts on them. A cool site and rich ground should be chosen for the seed-bed, as unless a quick growth is secured from the first good hearts cannot be expected. Thin out the seedlings as soon as practicable and prick out the permanent

plants on a convenient plot where their wants can be attended to. When a fair amount of leafage has been made, lift the plants carefully with a trowel, making sure that the roots are in quite a moist condition. Plant out on good land, and when established, give one or two waterings with liquid manure. Two useful sorts for the purpose are Wheeler's Imperial and Cocoa-nut.—C. N.

Spinach.—In the occasional correspondence that has appeared against size in vegetables I have not seen any disparaging note as to the improved form of Spinach, whose leaves in comparison to the old type are about in the proportion of a Rhubarb to a Cabbage leaf, so that this probably is a case in which size does not mean inferior quality. Of these newer forms, which are undoubtedly a marvellous improvement on the old kind, whether for size and substance of leaf or long-standing properties (I am writing of the round-seeded summer Spinach), there are, so far as I have seen, only two distinct types, although there are many different names. The one has a leaf nearly as broad as long, is dark green in colour, and very thick and fleshy. In the other the proportion of length to breadth would be as three to two, the colour is a pale instead of a deep green, and the leaf is lacking in substance when compared with the broader leaved form. I should prefer the last-named.—E. BURRELL.

Turnips.—I tried a large number of varieties of Turnips, both early and late, last season with the view to determine if possible the most reliable kinds, and to confine myself this year to as few sorts as possible. The best kinds respectively for first early, second early, main-crop, and late (for winter work) were Early Purple-top Munich, Snowball, and Red Globe. The first mentioned is valuable for its earliness, as, sown with several other sorts, it was ready nearly a week earlier. Snowball is an excellent Turnip, doing its work quickly and standing well; it is of first-rate quality. Red Globe is far and away the best winter Turnip, not that it stands the weather any better than sorts like Orange Jelly or Chirk Castle, but it is equally hardy, and, what is a chief consideration, of superior quality. Yellow-fleshed Turnips, in fact, are always objected to, and so Orange Jelly is shelved, whilst Chirk Castle goes very hard long before the season is over, and also retires in favour of Red Globe.—E. BURRELL.

Early Peas.—Pickings from William Hurst Pea sown on a south border the last week of November, 1898, were made this season just ten days before any could be gathered from the earliest taller sorts sown on the open quarter late in January. Daisy sown on the latter date is close on the heels of the tall Peas. For small gardens where there is a daily demand for Peas in their seasons and the space at disposal does not admit of growing many tall sorts, I should recommend a second sowing of William Hurst with Daisy in January. Equally good Peas of dwarf habit as early and second early are Dwarf Defiance, Favourite, and Dwarf Mammoth, all of dwarf, compact habit, splendid croppers, and of excellent quality. It is fortunate that the several firms who have turned their attention to the improvement in Peas have made a special point of working on fairly dwarf strains, as anything up to, say, 4 feet in height is much better for the average garden than varieties of the Ne Plus Ultra type. Not that I wish to disparage the last named, for, given plenty of room and tall stakes, it is still one of the best.—C. E.

Feeding Tomatoes.—In most cases a good lot of fruit will have set upon Tomatoes by this time, and if the most is to be made out of the space at command, feeding must now begin in earnest. As I have before now pointed out, I use a very much thinner bed of soil on the benches than is usually given, and in my case I begin to top-dress and feed as soon as the first bunch of flowers has set well. These are usually within a few inches of the soil, and before ripening have to be tied up, or the weight would bring them on

the top-dressing, when they would be spoilt. The top-dressing this year consisted of a little loam with one-third of burnt refuse, and another of manure prepared as for Mushroom growing. The bed was first well soaked and equal parts of superphosphate and kainit sprinkled on at the rate of about an ounce to the yard surface. This the roots have already pushed through, and a little more must be added shortly. The way the plants respond to this treatment is very satisfactory, the fruit swelling very rapidly and leaf growth being very strong. As a matter of fact, Tomatoes may be fed very strongly with almost any kind of manure not too rich in nitrogen directly they have fruit upon them, but not before.—H.

Transplanting Celery.—It matters little how stocky and healthy the young plants of Celery may be, satisfactory results cannot be expected unless due care is taken at the time of removal into the trenches. A very common mistake is lifting the plants while the roots are in a semi-dry state. Many of the roots then snap off and are left in the frame. Moreover, the plants soon flag if exposed only for a short time to sun and wind, also losing their lower leaves. Then, again, the trench is often insufficiently moist, and watering after planting performed in a half-hearted manner. Under these conditions one cannot wonder at Celery bolting. The chief things to be observed are thorough moistening of the bed in which the plants are growing, this being best done the day previous, the trenches also being served similarly. Planting completed, a thorough watering with rosed water pots should be given, and if in a very exposed situation, a few evergreen branches should be fixed in the soil on one side of the trench in a slanting position. These will afford a grateful shade till the plants become established. In watering avoid mere dribbles, these leaving the bottom roots untouched. Occasional thorough drenchings are what are needed, the plants then standing some time without being distressed. Celery if healthy and moist at the roots will stand any amount of sunshine, and growth in tropical seasons is more firm and less liable to decay should the winter turn out wet.—N. N.

Bad growth on Potatoes.—Whatever may be the aspect of Potato breadths a few weeks hence, certainly seldom have they borne a more ragged appearance than now or just recently. Seldom have Potato plants come up so badly as they have during the past spring. Not only has there been great irregularity, but there are also many blanks and generally weak growth. It seems so very certain that the primary cause of this unevenness as well as comparative weakness was due to the long spell of cold nights endured some time since. I have no recollection of Potatoes remaining so long in the ground before the tops came through as this season, due no doubt to the coldness of the soil and frosty nights. That even tops just beneath the soil did get nipped with frost there could be no doubt, whilst those above ground, even where they apparently were not hurt, yet were so far as to greatly check growth and cause the foliage to present a browned or unhealthy appearance. It is not possible that generally we can have a good Potato season, but if the breadths somewhat escape disease something will be gained. No doubt a contribution to this growth defect was the comparative mildness of the winter, which rendered it so difficult to keep the seed tubers restful. There were times in the winter when temperature ranged very high and growth or sprouting could not be checked except where the stores were exceptionally cool. It is, however, very difficult to keep any stores cool when the atmospheric temperature ranges from 50° to 60°. Naturally tubers prematurely sprouted and disbudded suffered, whilst those planted in cold soil with even stout sprouts attached also suffered from the check furnished.—A. D.

Broad Beans.—Possibly it is due to the excellence of garden Peas, of which we have now such a wonderful variety and of first earlies so superior

to the old hard rounds that formerly were chiefly grown, that Broad Beans seem every year to become less in request. A very hardy and early product, and when gathered fresh a very nice one, these Beans should be much more widely consumed than they are. But possibly they are now generally regarded as of low caste amongst vegetables. In any case they do not now enjoy the popularity that was once existent. It is possibly the case that the introduction of the long-podded Seville type has not increased our liking for Broad Beans. One of the nicest of all no doubt is the Early Longpod, as the Beans are small and of nice flavour. The green form is probably the best. I learned last winter that in some parts of Surrey the old and generally discarded Early Mazagan was greatly esteemed. The beans being produced in great abundance, are smaller than those of the Early Longpod, and in flavour bear closer resemblance to that of Peas. I had some seed given me, but, unfortunately, forgot to sow until too late. However, no one dreams of growing the Mazagan Bean in large gardens now, and the Seville type has become almost the only one grown. The Broad Windsor, whether of the old stock or the green, produces beans too large for ordinary use, although the flesh is nice when the shucks are removed after cooking and thus served to table. Those who still like these Broad Beans will find that the old Johnson's Wonderful, also sometimes known as Mackie's Monarch, is on the whole the most prolific and best. Exhibiting Longpod Beans has given the Seville a prominence it hardly deserves.—A. D.

FEEDING ONIONS.

"A. D." could not have read my notes carefully, or he would have seen that they had reference to autumn and not to spring-sown batches. The latter make their earliest growth at the most favourable, the former at the most unfavourable time of the year, which makes all the difference as to what kind of larder is most suitable. "A. D." compares the soil of an Onion bed to which liquid manure is applied to that of a sewage farm. The comparison, however, is very wide of the mark—the one, as used by practical kitchen gardeners, being clear, sweet, and highly nutritious, the other thick and sour. Besides, gardeners do not pour liquid manure—which is by far the best stimulant for Vines and Peach trees—on to their Vine and Peach borders until it becomes a soddened mass, and why do so with Onion beds? I grew autumn-sown Onions for many years, and have shown bulbs 5 inches or 6 inches in diameter by the middle of June. I used to incorporate a moderate quantity of manure only when digging the ground, and mulch with spent Mushroom manure and feed with farm liquid in spring. The mulch was necessary to keep the surface comfortably moist. I am not a believer in so much extra deep trenching as some, its merits being, I think, more imaginary than real; besides, when manure is buried 3 feet deep the Onion roots do not reach it before the bulbs are three parts grown, and by the roots rushing into a thick layer of rich manure so late in the season, the very thing complained of by "A. D.," viz., soft, bad-keeping Onions, is produced. It is just this excessive underground manuring that is the cause of so many Onions going bad or growing out at the crowns during winter. Years ago when a more rational method of cultivation was adopted we heard very little of Onions failing to keep. It is quite certain that large quantities even of the Tripoli class are kept sound through the winter, or how could so much seed be offered for sale. I think the Giant Rocca and the straw-coloured variety, Golden Rocca, the best for autumn sowing. I have seen large breadths of these grown on moderately rich land and one or two waterings with liquid manure given, the bulbs swelling to a large size and keeping splendidly. In regard to the practice of sowing Onions under glass it is advantageous in low-lying, cold, late

gardens or where the Onion maggot is troublesome, but I do not think it is ever likely to become general. N.

Cucumber Royal Osborne.—In reading the note on the above (p. 387) I was unable to see what Mr. Burrell intended. I am aware there are certain growers who see no good in anything new, but there is any number of good Cucumbers. I question if a good type of Telegraph can be beaten, and if the new variety is any improvement on that, it is certainly a decided acquisition. I note that this variety is certainly new to many, as it did not pass the ordeal of the Royal Horticultural Society's committee. By this I do not infer it is any the worse. There is always room for new things if good. I fail to see why one new Cucumber which few have grown should be so highly commended by Mr. Burrell when he says it is difficult to see the necessity for sending out new things at all. I have this season grown Royal Osborne, but prefer to give it another trial as a winter fruiter before praising or condemning it.—GROWER.

Lifting Shallots.—These are often lifted much too early, and the old adage, to plant on the shortest and lift on the longest day, though good advice in some seasons, will certainly not be so this year—in this locality at any rate. Pulled too early, the bulbs, though they may look ripe, are not really finished. They will lose more weight than they ought to in the ripening, and as a rule will start to grow earlier than others properly developed. Early thinning of the clumps and allowing the remainder to develop properly will ensure large and heavy roots for keeping, while the half-grown thinnings are very useful for salad or cooking. The distinct flavour of the Shallot is very much liked by many people who dislike or are indifferent to the Onion. As with many other vegetables, the largest or giant kinds are not the nicest; indeed, many of these resemble the underground Onion more than the Shallot. Shallots like a firm and not too rich root-run; they are better planted with a trowel or dibber than merely pushed into the soil with the fingers. Leave the upper half inch of the bulb out of the soil. When they are harvested they should lie in the sun until thoroughly dry, and the cottager's plan of hanging them on a sunny wall is a very good one.

Peas Earliest Marrow and Chelsea Gem.—These are the varieties which I usually choose for sowing in boxes to be planted out in March to supply the first dishes in early summer. This season Earliest Marrow was earlier in its podding than Chelsea Gem, the reverse of what has happened in other years. They, however, were separated only by a few days. Both are good early sorts, the latter a dwarf, or 15-inch Pea, the other 3 feet. Some rows sown in February on a narrow border in front of some forcing houses are as early as the box-sown plants, and being in soil quite fresh to Peas they have grown almost, or quite, 2 feet in height, producing an abundant crop. Peas are later than usual this season through the extreme cold that has prevailed, general pickings not commencing until June 13. Small dishes were obtained a little earlier. The extreme heat and drought tell unfavourably on Peas in soil not well manured and deeply dug, the haulm having quite a yellow cast about it, although freely mulched with half-decayed manure. Early Morn, sown with these and planted on a portion of the same border, is several days later.—W. S.

Runner Beans as garden breaks.—Lately I observed an orchard on grass shut off from the better-kept garden by a row of Scarlet Runner Beans 350 feet long. This was one of the longest staked rows of Beans I have seen. It backed a broad herbaceous border that contained a fine representation of hardy plants. Now useful as this line of Beans will be and doubtless enormously productive, yet will it lack some variety, as the blooms will all be scarlet in colour. Certainly had some white-coloured ones been mixed

with the reds there would have been pleasing variety added. So far we seem to have in runner bloom no other colours, but we have some varieties that produce pleasingly coloured pods—purple, carmine striped, and golden, and a few of these sown here and there would have lent some charm to the line. Then very pretty would have been a plant here and there of Canary Creeper or of Convolvulus major. We seem in our kitchen gardening so utilitarian, that we forget what pretty effects can be obtained from even a row of Runner Beans at trifling sacrifice. Sweet Peas, where a good trench has been prepared for them and the seed is thinly sown, also make beautiful breaks or hedges for kitchen gardens, and so grown they produce flowers of great beauty and exceeding usefulness. But whilst a well-staked row of Runner Beans is whilst in bloom a pretty object, it is so easy to add to its beauty very much when other varieties are employed. Even some of the ornamental Gourds trained over rough wood supports make a pretty background. We may well seek to carry into our vegetable gardens all the beauty we can.—A. D.

Cardoons.—Those who grow this vegetable will by this time have the main batch sufficiently hardened off for planting out in trenches. I like to give them a rather wider trench than that usually accorded Celery and a rich root-run. If the best results are expected, plenty of room must be allowed between each plant, 2½ feet being none too much. Dryness at the roots must at all times be guarded against, a fortnightly soaking of liquid manure when the plants get established being none too much if the season is dry. No less a distance than 5 feet should be given between the trenches; plenty of soil will then be available for earthing up, and in the interval such quick-maturing subjects as Lettuce may be grown on the ridges. Earthing up should not be proceeded with until the plants are fully grown, when hay-bands should be wound round to prevent the soil getting in amongst the leaves. Being tender, lifting must be practised as soon as sharp weather sets in. Cool pits or even sheds, where Bracken or short litter can be laid over them, answer well for storage during winter. Cardoons are useful in helping out other vegetables, and at some tables are much appreciated.—B. S. N.

Winter Onion plots.—This note may seem premature, but Onion growers know that the firmer the rooting medium, the better chance there is of a satisfactory crop; therefore, timely preparation is certainly advisable. Plots from which early hand-light Cauliflowers have been cleared are often utilised for Tripoli Onions, and as these have been subjected to a continuous treading since last autumn, at least between the lights, air has to some extent been excluded. Turning up and exposure are therefore necessary before another crop is planted. Cauliflower roots are often infested with tiny grubs, some of which are unavoidably left in the ground when the old stumps are pulled up. These in the necessary preparation for the Onion crop are effectually destroyed. First of all wheel on to the plot a moderate quantity of manure, a little soot, gas-lime, and if at hand some burnt refuse or wood ashes. Let this be worked well in to a depth of 18 inches, so that the young roots get the benefit of it from the start. Trenching completed, give a thorough treading, repeating it in a month and again when the seed is sown.—J. C.

Forced Potatoes.—The best dish of Potatoes in the wonderful collection of vegetables exhibited recently at the Drill Hall by Mr. Beckett was that labelled Mona's Pride. This variety, if true, is of the Walnut-leaf order, and not an Ash-leaf. The true Walnut-leaf variety throws green sprouts, and is a bad one to break fresh shoots should the first or primary ones get broken off. But whilst having this feature, yet the variety produces tubers of the greatest excellence. Indeed, it is doubtful whether there are in commerce any of superior quality. Mona's Pride used to be a popular variety in the Isle of Man, and was largely grown there for supplying the Lancashire

markets. The late Mr. W. Dean was largely the agent for introducing it into this country under this name, but there seems reason to believe that it was but a good stock of the old Walnut-leaf variety after all. Whatever its deficiencies in some directions, at least, it seems to have been productive in Mona's Isle. Of the Ashleaves there is more diversity in names than in distinctions. Any selected short-topped stock is good, and where the sets are well preserved during the winter and are planted in rich, deep, sandy soil they still produce wonderful crops. Laxton's Early, Sutton's Ringleader and Ninetyfold, Sharpe's Victor and some others of similar character are all good for forcing or very earliest border work. Somehow we do not seem in first early varieties to have by any means reached perfection. The ideal early one with short top, abundant cropping and of the best table quality still seems lacking.—A. D.

ORCHARD AND FRUIT GARDEN.

NEW NECTARINES.

It is yet full early to write on the merits of Nectarine Cardinal (here illustrated) as regards its general cropping, but there can be no question as to its value for forcing. The raisers, Messrs. Rivers, of Sawbridgeworth, who during the past few years have given us some splendid additions to our stone fruits, sent out Cardinal in the autumn of 1896. I believe it is a most profitable fruit for the market, as the high prices obtained for Cardinal some days before any other variety made its appearance well repaid the outlay, and as the trees attain size it will become more valuable. When I first saw this variety at the Temple show in May, three years ago, I was pleased with its quality. I am aware size is almost of equal importance in these days, as small fruits find less favour and are not so valuable. In Cardinal Nectarine we have size, flavour, and crop, and I must not omit appearance also, as the illustration will show. Few, if any, Nectarines have a nicer appearance. With this note I send a fruit from a maiden tree planted only last November to show that trees in a small state fruit freely. This variety I first planted two years ago, and I am so well pleased with it, I intend having more trees this autumn. In pots this, with Early Rivers, is a great favourite with Mr. Hudson at Gunnersbury House. Those who have seen Messrs. Rivers' trees will have noted their free-bearing under pot culture. In a great many gardens there is no convenience for pot trees, and not the labour to give them the necessary attention, as, unless the best culture is given, pot trees are not profitable. With pot trees, forcing may be begun earlier, and this is important where large quantities of fruit are needed. There is a great gain with Cardinal even over Early Rivers, as this ripens from a week to ten days earlier, and growers who supply the market well know what a few days' earliness makes in the prices of fruit in the London season. For home supplies Nectarines are a welcome addition to the dessert in May and early June. This variety may be had then without severe forcing. The Cardinal is not suited for open-wall culture, and the Messrs. Rivers did well in giving us these facts, as we have plenty of Nectarines that do well, and the new Early Rivers in my opinion is even superior to the well-known Lord Napier in this respect. Cardinal is a grand variety for the cool house. I have some small trees at the back of a low pit that promise well. Grown in pots it is very prolific, the growth is not so spreading as in some kinds, and the fruits colour well.

Early Rivers is a larger fruit than Cardinal and different in colour, being of a darker hue. It is certainly one of the best of the Messrs. Rivers' introductions. It does well in most soils, and being so good on open walls will make it more valuable. For many years my favourite Nectarine was Lord Napier, and I was slow to believe that it could be superseded. I have grown the two together, and Early Rivers when forced is quite a fortnight earlier. The same remarks apply to trees on open walls. Last season on a south-west aspect I gathered Early Rivers eighteen days before Lord Napier. Early Rivers is a much stronger grower than the newer Cardinal. On walls it makes a splendid growth in a light soil. This year, I regret to say, this variety suffered badly, as did all others, from the severe weather we had when the trees were in bloom. Early Rivers is equally valuable, as being a few days later it forms a good succession. I note in very light, porous soils Early Rivers has a tendency to stone-splitting. This can be remedied by the



Nectarine Cardinal. From a photograph of a fruit sent by Miss Solomon, Centre Avenue, Covent Garden.

addition of more suitable soil at planting, and I notice the fruits are freer from this as the trees increase in size. I am a strong advocate for free extension with young trees, and given this, Early Rivers on walls in the open will, I am sure, prove a most profitable variety.—G. WYTHES.

— Cardinal is the earliest Nectarine with me, being from ten to twelve days earlier than Early Rivers. It is of the highest flavour, highly coloured, sets well and swells away very quickly. This is where the gain in time comes in. It is clingstone to a certain extent, but scarcely enough to be noticed when well matured. It hangs well on the tree. The growth is not gross under pot culture. If planted out, I think a limited border would be the best.—J. HUDSON.

Melon William Tillery.—Only green-fleshed Melons are tolerated here for the table, and flavour is the crucial point, size and appearance being a secondary consideration. I have tried many varieties, new and old, and have grown the above annually

since its introduction, and I am conservative enough to believe even now, after so many years, that William Tillery is the best all-round Melon I have tried. Knowsley Favourite and Dicksons' Exquisite follow, both being delicious.—J. R.

Strawberry Royal Sovereign.—Experience with this variety in the present season confirms the opinion already formed of it, viz., that it certainly is not one of the best for outdoor work; not, at least, on this light dry soil. Even during a dry time like the present the fruit keeps badly, spotting in many cases before it is quite ripe, and that despite precautions in the way of wide planting and early mulching with nice dry litter. It is of large size and good quality, but as a cropper far below Noble, Vicomtesse H. de Thury, and Sir J. Paxton. I have tried it under annual treatment, but the amount of fruit obtained was very small. Vicomtesse and Paxton are still two of the most reliable. The former throws a fair proportion of large fruit at the first ripening, which serves very well for dessert until Paxton comes in, when the bulk of the small berries is reserved for preserving. With those who like a very deep rich-coloured fruit either for stewing or as a preserve Black Prince is still a favourite.—E. BURRELL.

Strawberry President.—I do not think "H. R.," who notes the value of this variety at page 3, will have cause to fear its disappearance, as in this locality there are many acres of it grown, while in Kent there are much larger breadths under cultivation. I quite agree with all "H. R." says regarding its value for the open air, but I do not think he is quite right in stating that it is in such little favour with growers under glass. In this locality it is still grown for market in quantity by growers who know its value, as it travels well, and, what is better, it sells well. I have for a quarter of a century grown this variety for forcing, and should certainly hesitate before removing it from my list. I admit some years ago I did grow too many kinds. The advent of some new varieties weaned me from the old kinds, but I never put President on one side. Instead of 1000 plants for forcing I now grow 2000. For latest supplies it is a grand Strawberry and not liable to mildew.—WEST MIDDLESEX.

The Gooseberry caterpillar.—This terrible pest is too familiar to most gardeners, being most troublesome in dry seasons. If allowed to go unchecked, the present year's crop is much affected, and the wood and buds for next season rendered puny. There are many so-called remedies, some of them being positively dangerous, as they are of a poisonous character. The old-fashioned plan is, I consider, hard to beat. I mean dusting the lowermost parts of the bushes with lime and soot the moment the pest appears. It invariably shows itself first towards the base of the tree, and if the mixture is dusted in an upward direction the caterpillars will fall wholesale, when another dusting on the ground will settle them. The soot and lime should be used in equal proportions. I have always found this an effectual remedy provided it is applied in time and in earnest. The few fruits which unavoidably get covered with the mixture can easily be washed before being used. I certainly do not

believe in the poisonous mixtures one often sees recommended.—J.

SOCIETIES AND EXHIBITIONS.

NATIONAL ROSE SHOW.

JULY 1.

THE show of 1898 was indeed a memorable one, and this in spite of the remarkably dry time that preceded it. This year also we have had heat, and some cold also. Cold nights, cold winds, and biting frosts as Roses were starting into growth may possibly have had something to do with the general slight falling off noted in some classes. The show just held was a good average one, for in not a few classes the blooms were superb, colour, form, and fulness being well-nigh perfection. Really new Roses were not numerous, the only one selected for gold medal honours being the lovely H.T. Sunrise, which is destined to be in every garden before long. In most classes the competition was keen; so much so, that the judges must have had some difficulty in making the awards. Happily, the sun was not so overpowering as on a similar occasion a year ago; consequently the blooms in a large number of instances remained in perfect condition till the closing of the show.

NURSERYMEN.

There were some seven competitors in the first class for the champion trophy, which is for seventy-two blooms, distinct, the first prize being secured by Mr. B. R. Cant, Colchester, who had many admirable specimens—indeed, a strong lot throughout. His flowers of The Bride and Comtesse de Nadaillac were superb, the colour of the latter particularly so, while Souv. d'Elise Vardon and Muriel Grahame were exquisite, a similar remark applying to Mrs. Grant, which, if rather small for this kind, was perfect in form and grandly coloured. Other good things were Souvenir d'un Ami, Mrs. J. Laing and Helen Keller. Mrs. Cocker, a fine pink, was also noted, while Abel Carrière and Xavier Olibo were especially good among the darker kinds. Messrs. D. Prior and Sons, also of Colchester, took the second prize, having excellent blooms of Dr. Sewell, Mrs. W. J. Grant, Victor Hugo, Reynolds-Hole, Comtesse de Nadaillac, Souvenir de S. A. Prince, while Maman Cochet and Mrs. J. Laing were really of high order. The third prize was secured by Messrs. Harkness and Son, Bedale, Yorks, Her Majesty, Jean Ducher, Mrs. Sharman Crawford, Souvenir d'Elise, Captain Hayward, all very fine, Mme. de Watteville in this group being of exceptional colour. For forty distinct varieties, three of each, Messrs. D. Prior and Sons took the leading place, having really magnificent trebles throughout. Their finest, however, were Mrs. W. J. Grant, Maman Cochet, both faultless in colour and form, Prince Camille de Rohan, Mme. de Watteville, Ulrich Brunner, Mrs. Sharman Crawford, Margaret Dickson, Her Majesty, Mme. Suzanne Rodocanachi, Prince Arthur, &c. Messrs. B. R. Cant and Co., Colchester, were second, having good Mme. G. Luizet, Kaiserin Augusta Victoria, François Michelin, Her Majesty, Mme. Cusin, Mrs. Paul, Mrs. W. J. Grant and Mrs. Sharman Crawford. Messrs. F. Cant and Co., Colchester, were third. For forty-eight distinct, Messrs. Townsend and Son, Worcester, were first, having Gustave Piganeau, Mrs. J. Laing, Mme. Suzanne Rodocanachi, Mrs. Sharman Crawford and Horace Vernet particularly good, the second prize going to Messrs. G. and W. Burch, Peterborough, whose best were Helen Keller, Laurence Allen (a delicate pink, resembling somewhat Mrs. W. J. Grant), Her Majesty and Mrs. Sharman Crawford. For twenty-four blooms, distinct, Mr. Geo. Prince, Oxford, secured the leading prize, having The Bride, Reynolds-Hole, Comtesse de Nadaillac, Beauté Lyonnaise, Catherine Mermet, Innocente Pirola among the best, Mr. Chas. Turner, Slough, being second with Prince Arthur, Maman Cochet, Her Majesty, Muriel Grahame, Mrs. Laing, and

Kaiserin Augusta Victoria as the best. Mr. John Mattock, Oxford, for third place showed Comtesse de Nadaillac, Her Majesty, Souv. d'Elise, and Mme. de Watteville. There were seven competitors in this group, the flowers being good throughout. For twenty-four distinct, three blooms of each, Mr. John Mattock took the premier place, being specially strong in Teas, Mme. Cusin, Souv. d'Elise, Mme. de Watteville, Catherine Mermet being excellent; Mrs. J. Laing, Mrs. Sharman Crawford, and Her Majesty being also good. Messrs. G. & W. Burch, Peterborough, were second with flowers of larger size and superb quality: indeed, in a class for H.P.'s alone these would have taken a good deal of beating. Her Majesty, Gustave Piganeau, Mrs. J. Laing, Margaret Dickson, Mrs. Sharman Crawford, and Captain Hayward were superb. Messrs. Townsend and Sons, Worcester, were third. For twelve blooms, distinct, sent out by Messrs. A. Dickson and Son, Messrs. F. Cant and Co., Colchester, came first, Ethel Brownlow, Mrs. W. J. Grant, Marchioness of Dufferin, and Mrs. Sharman Crawford being best; Messrs. Dickson, Newtownards, second with Mrs. Grant and Mrs. Ed. Mawley (very fine), and an exquisite bloom of Muriel Grahame. Mr. B. R. Cant was third, with the lovely shell-pink Killarney, Mrs. Grant, and Marchioness of Dufferin among his better flowers. For twelve distinct varieties, Teas and Noisettes included, space not to exceed 6 feet by 4 feet, Mr. Geo. Prince, Oxford, secured leading place, staging his blooms in vases on a velveteen cloth. These were very attractive. Capt. Hayward, Catherine Mermet, and Comtesse de Nadaillac were among the best of this pretty group. Mr. John Mattock came second, having Marie van Houtte, Comtesse de Nadaillac, Mme. Hoste, and exquisite flowers of Hon. E. Gifford and Anna Olivier. Messrs. Paul and Son, The Old Nurseries, Cheshunt, were third.

TEAS AND NOISETTES.

For twenty-four blooms, distinct, Messrs. Frank Cant and Co., Colchester, were first with good all-round blooms of Edith Gifford, Niphetos, a superb flower; Mme. de Watteville, Medea, Comtesse de Nadaillac, Ethel Brownlow, Maman Cochet, Rubens, &c. These were a really superb lot, faultless throughout. Mr. B. R. Cant, who set up excellent Amazone, a rich full yellow; Cleopatra, Bridesmaid, Hon. Edith Gifford, Catherine Mermet, Ernest Metz, and the rather white-looking flower called Golden Gate, was second. Mr. Geo. Prince, Oxford, was third. For twelve blooms, as above, Mr. J. Mattock was first, having some capital blooms of Amazone, Elise Vardon, Comtesse de Nadaillac, Maman Cochet, and Mme. de Watteville. Messrs. J. Burrell and Co., Cambridge, had a superbly coloured Luciole in their lot. For eighteen kinds, three of each, Mr. Geo. Prince obtained the leading position, his finest being Maréchal Niel, Souv. de S. A. Prince, Maman Cochet, Comtesse de Nadaillac, the lovely tinted Princess of Wales, and Innocente Pirola. Mr. B. R. Cant, Colchester, had Muriel Grahame, Cleopatra, Ernest Metz, The Bride, and Golden Gate in his second-prize lot, Messrs. Frank Cant and Co. being third. For thirty-six distinct varieties of garden or decorative Roses, premier honours were secured by Messrs. Paul and Son, Cheshunt, with a lot of handsomely arranged bunches, Gustave Regis, W. A. Richardson, L'Idéal, Mme. Pernst-Ducher being fine. Many of the single kinds were here also in equal profusion and delightfully fresh. Messrs. Geo. Cooling and Son, Bath, with one of their fine collections, among which Etoile de Mai is a fine white, were second. For eighteen similar kinds, Messrs. Frank Cant and Co., Colchester, were first, having some charming masses of Ma Capucine, Rambour, Gustave Regis, Mme. Falcot, W. A. Richardson, Mme. C. Guinoisseau, and Souv. de C. Guillot. Mr. Chas. Turner, Slough, was second, having Bardou Job, Hebe's Lip, Rosa Mundi, W. A. Richardson, Princess Marie, white, and Gustave Regis in capital form. For eighteen garden kinds, open to all nurserymen, Mr. Chas. Turner

was first, Messrs. F. Cant and Co. second, and Mr. Geo. Prince third, many similar varieties being employed as previously. For twelve Hybrid Teas, open to nurserymen and amateurs, Messrs. F. Cant and Co. were first with Clara Watson, Viscountess Folkestone, Souv. du Président Carnot as best, Mr. B. R. Cant being second, his best being Marquise Litta, Killarney and Antoine Rivoire. For twelve blooms of any yellow Rose, Mr. Geo. Prince was first with Comtesse de Nadaillac, followed by Mr. J. Mattock and Mr. B. R. Cant, who put up Marie van Houtte and Madame Hoste respectively. For twelve blooms of any white Rose, Mr. B. R. Cant had White Lady, Bessie Brown and The Bride, following in the next two places being Messrs. A. Dickson and Prior and Sons. For twelve blooms of any dark or light crimson, Messrs. Prior and Sons showed General Jacqueminot, Mr. C. Turner and Mr. J. Townsend having Ulrich Brunner and Gustave Piganeau. In class 18 Mr. Chas. Turner set up a superb lot of Mrs. J. Laing, Mr. B. R. Cant an exquisite set of Mrs. Grant, while Messrs. Prior and Sons staged Mrs. J. Laing, the prizes going in the order given, with splendid flowers and a strong body of competitors. In class 19 Mr. Geo. Prince had a splendid dozen of Comtesse de Nadaillac, Mr. J. Mattock, also of Oxford, having Catherine Mermet, and Messrs. F. Cant and Co. Mme. de Watteville. In the next class Messrs. Dickson, Ireland, had Bessie Brown, and Messrs. Prior Maman Cochet, very nice flowers. For twelve distinct Roses, offered since spring, 1896, Messrs. Dickson, Newtownards, were first, Mr. B. R. Cant and F. Cant and Co. taking the other places. For decorative Roses in a space of 4 feet by 3 feet, Messrs. Paul and Son, Cheshunt, were first with Royal Scarlet (very fine), Mr. C. Turner was second, having Moschata alba in capital form, also Polyantha grandiflora, Mr. J. Mattock being third. For nine varieties of button-hole Roses, Mr. J. Mattock was first with a decidedly pretty lot, Mr. G. Prince and Messrs. Townsend taking second and third places. For three sprays of Roses suitable for ladies' wear, an exquisite triple arrangement from Mrs. O. G. Orpen, Colchester, who employed Polyantha Cecile Brunner, Ma Capucine, and Perle d'Or in long spray-like outline, was first, Miss B. H. Langton and Mrs. G. W. Cook being second and third.

AMATEURS.

For thirty-six distinct kinds, Mr. E. B. Lindsell, Hitchin, was first, Mrs. W. J. Grant, Mme. G. Luizet, Innocente Pirola, Mrs. J. Laing, François Michelin, and Kaiserin Augusta Victoria being among his best. Mr. T. B. Haywood, Reigate, had excellent Gustave Piganeau, Eugénie Verdier, Comtesse de Nadaillac, and Her Majesty, Rev. J. H. Pemberton being third with a splendid lot of slightly early flowers. For twenty-four, distinct, the Rev. A. Foster-Melliar, Ipswich, took leading place. Dr. Sewell, fine crimson; Caroline Testout, Ulrich Brunner, Mrs. W. J. Grant, and Her Majesty were all fine, Mr. Alfred Tate, Leatherhead, being second, having a magnificent bloom of Princess Beatrice, which was also selected for the silver medal bloom; Maman Cochet, and Xavier Olibo, the latter grandly coloured; Mr. F. W. Campion, Reigate, taking third. For twelve triplets, Mr. E. B. Lindsell was first, having excellent Marie Baumann, Her Majesty, Caroline Testout, and Mrs. Laing. Mr. T. B. Haywood, Reigate, was second, having finely coloured blooms of Mrs. Sharman Crawford and Mrs. J. Laing. Colonel J. H. Pitt, Maidstone, who was third, staged in good form Mme. G. Luizet and Marquise de Castellane. For twelve blooms of any Rose except Tea or Noisette, Mr. T. B. Haywood was first with Her Majesty, very even and full coloured; Mr. C. J. Grahame, second, with Mme. Gabriel Luizet, Mr. O. G. Orpen having Kaiserin Augusta Victoria in the third place. For twenty-four distinct, Mr. E. M. Bathune, Horsham, showed Caroline Testout, Marie van Houtte, Captain Hayward, Suzanne Marie Rodocanachi in good style; second, Mr. W. C. Romaine, Windsor, Prince Camille de

Rohan and Princess of Wales being his best. For eighteen distinct, Mr. Conway Jones, Gloucester, was first, having Maman Cochet and Mrs. J. Laing, Mr. Edward Mawley taking second, having Mrs. W. J. Grant, Caroline Testout, Dr. Andry, and Mrs. Sharman Crawford in good form. For eight distinct kinds, three of each, Mr. Ed. Mawley, Berkhamsted, took leading place, having beautiful sets of Marie Finger, Mrs. Sharman Crawford, Etienne Levet, Caroline Testout, and Mrs. E. Mawley, a good second being Mr. P. G. C. Burnand, Reigate, with François Michelon, Mrs. Sharman Crawford, &c. This gentleman took the lead for nine blooms of any Rose except Tea or Noisette with superb Mrs. S. Crawford, Rev. Hugh A. Berners second, and R. E. West third, showing Margaret Dickson and Mrs. Laing respectively. For twelve distinct, Miss B. H. Langton, Hendon, was first, Captain Hayward, Mrs. W. J. Grant, Her Majesty, Mrs. Sharman Crawford, Xavier Olibo, and Marquise Litta being excellent, the last being also selected as the best and awarded the silver medal. Rev. F. Page Roberts, Scole, had Maman Cochet very good. For six blooms, Mr. G. W. Cook, North Finchley, was first with Mrs. J. Laing; second, Mr. J. Bateman; third, Mr. R. Foley-Hobb, Worcester, all having the same variety. For nine distinct varieties, Mr. L. E. Times, Hitchin, was first, Gustave Piganeau and Mrs. Laing being good; second, Mr. E. R. Smith. For six blooms, distinct, Mr. J. Thompson, Rounds Green, was first, Captain Hayward and Prince Arthur being best, the two following places being taken by Mr. Freshfield and Mr. J. Hurst. Six blooms, excepting Tea or Noisette, brought good forms of Mrs. J. Laing from Mr. F. Wellesley, Woking, and Mr. R. W. Bowyer, Mr. J. A. Hammond, Burgess Hill, being third with Caroline Testout. For twelve blooms, distinct, Mr. G. Moules, Hitchin, had nice blooms of Souv. d'Elise Vardon and Niphotos; second, Mr. R. A. C. Johnson, Capel St. Mary, Suffolk, Cleopatra, Madame Verdier, and Madame G. Luizet being good. For four distinct varieties, three of each, Rev. F. Page Roberts was first, having Comtesse de Nadaillac, Mrs. J. Laing and Cleopatra, very fine; second, Mr. H. P. Langdon, with good Ulrich Brunner and Mrs. W. J. Grant. Mr. G. W. Cook had good triplets of Mrs. J. Laing and Mrs. W. J. Grant. For twelve blooms, open to all amateurs, the prize was the Ramsay cup, and here the Rev. J. H. Pemberton, Havering, was first with Her Majesty, Mrs. Laing, Comtesse de Nadaillac, Victor Hugo and Marchioness of Dufferin; second, Mr. C. J. Grahame, who had Innocente Pirola and Madame Gabriel Luizet. Mr. Pemberton was also first for nine varieties, of five trusses each. These were disposed in vases, Clara Watson, Caroline Kuster, Mrs. Grant and Caroline Testout being good, Mr. O. G. Orpen being a good second. For six blooms from amateurs who have never won a prize at a National Rose show, Mr. J. T. Thompson, Rounds Green, was first, Maman Cochet, Mrs. Laing and Caroline Testout being his best; Mr. F. Wellesley, Woking, second, and Mr. G. H. Baxter, Brentwood, third. For amateurs who have never won a first prize as above, Mr. H. Adamson, Bedale, was first, with good Captain Hayward in his lot, Col. Pitt having La France and Caroline Testout. For six blooms, confined to amateurs who have joined the society since the last Crystal Palace show, Mr. E. Maltby, Feltham, was first with Maman Cochet and Niphotos. For the Langton Memorial cup for six blooms grown within eight miles of Charing Cross, Mr. G. W. Cook, North Finchley, was first, having a really splendid lot that included Caroline Testout, Mrs. W. J. Grant, Marquise Litta, Mrs. J. Laing and Capt. Hayward, all very finely shown, Mr. J. Bateman and Mr. E. Smith following second and third. For six blooms of new Roses, Rev. J. H. Pemberton was first, having Eugénie Bouillet.

TEAS AND NOISETTES.

In the Tea and Noisette trophy class for eighteen blooms, Mr. O. G. Orpen, Colchester, was first, having in capital form Cleopatra, Anna Olivier,

Bridesmaid, Corinna and Souvenir de S. A. Prince; second, Mr. Alex. Hill Gray, Bath, with Caroline Testout, Comtesse de Nadaillac, Catherine Mermet and Maman Cochet; and third, Rev. A. Foster-Melliard, who had nice flowers of Mme. Cusin and Maman Cochet. For twelve blooms shown by amateurs regardless of the number of plants grown, Mr. Alex. Hill Gray, Bath, was first, Ernest Metz, Cleopatra and Comtesse de Nadaillac being his best, Mr. A. Tate, Leatherhead, being second, and Rev. Hugh A. Berners, Harkstead Rectory, third. In class 50, Mr. A. Hill Gray again took the lead, The Bride, Catherine Mermet, Comtesse de Nadaillac, very fine, and Maman Cochet being all excellent. Mr. O. G. Orpen second, having Sylph, Ernest Metz and Anna Olivier; and third, Mr. E. M. Bethune, Horsham. For nine blooms of any one variety, Mr. Hill Gray took premier place, having The Bride, very fine, the same variety securing second for Mr. E. M. Bethune. For nine blooms, distinct varieties, Miss B. H. Langton, Hendon, came first, the Rev. R. Powley, Warminster, being second. For six blooms of any one variety Mr. Conway Jones, Gloucester, was first, having splendidly coloured blooms of Maréchal Niel; second, Rev. R. Powley, Warminster, who had Mme. Cusin. For nine blooms, open to growers of less than 200 plants, Mr. A. Munt, Slough, was first, having Comtesse de Nadaillac and Mme. de Watteville good in his lot, Mr. G. Moules coming second with Souv. d'Elise, Niphotos, &c. For six blooms as above, Rev. F. R. Burnside, St. Margaret's Bay, Dover, was first, having exceptional flowers of The Bride, Marie van Houtte, and Medea; second, Mr. R. W. Bowyer. For six blooms of any one kind, Rev. A. C. Johnson, Suffolk, was first with Hon. E. Gifford, Rev. F. R. Burnside being second. For four distinct Teas or Noisettes, three blooms of each, Mr. Conway Jones, Gloucester, came first with The Bride, Niphotos, Maman Cochet, and Mme. Cusin; Mr. H. P. Langdon second, having a very fine triplet of Hon. E. Gifford and Cleopatra. For six distinct varieties, seven trusses of each, Mr. O. G. Orpen, Colchester, took the leading place, his bunches of Caroline Kuster, Medea, Anna Olivier, Homère, and Souv. de S. A. Prince being all good, Miss B. H. Langton, Hendon, being second with mostly similar kinds. For six blooms of not less than three varieties, for amateurs who have never won a prize at the National Rose Society's show, Mr. E. Bewley, Rathmines, Dublin, was first, having as his best Muriel Grahame and Mme. Hoste, Mr. A. C. Turner being second, having good Mme. Watteville. For garden Roses, twelve distinct varieties, Mr. A. Tate, Leatherhead, was first, having a pretty lot that included good Bardou Job, Perle d'Or, Gustave Regis, the pretty Polyantha Anna Marie Montravel, Etoile d'Or, and Marquis of Salisbury; Mr. O. G. Orpen, Colchester, second, Macrantha, Ma Capucine and Gustave Regis being very good, and l'Idéal, a lovely bunch. For nine varieties of a similar character, Mr. A. F. Perkins, Holmwood, Surrey, was first with capital bunches of Camoens, Celestial, semi-double and deep pink: Beauté Inconstante, Mme. C. Guinoisseau, Carmine Pillar, and Marquis of Salisbury, Miss D. A. Nesfield, Spedhurst, near Tunbridge Wells, being second with several of the above sorts. For nine distinct varieties of garden Roses, Rev. J. H. Pemberton, Havering, was first, his set of W. A. Richardson being very fine in colour, and Alba rosea very attractive. For nine vases of Sweet Brier Roses in not less than six varieties, Mr. F. W. Campion, Reigate, was first, Meg Merrilies, red; Lucy Ashton, pink; Flora McIvor, deep rosy pink, being all charming and pretty kinds. For a vase of cut Roses arranged with any cut foliage, Ferns, or grasses (open to lady amateurs only), Miss E. Turner, Hendon, was first with La France blooms and foliage, Mrs. O. G. Orpen, Colchester, being second with Tea Roses and grasses, &c.

The gold medal for any new seedling Rose was this year awarded to Mr. G. W. Piper, Uckfield, Sussex, for his lovely new Tea Sunrise, which has already been described in these columns. Upon

this occasion Mr. Piper made a fine display both of pot plants, that demonstrated the free flowering of the variety from an early stage, and also of blooms set up in company with the coppery tinted foliage in large Princess flower-holders.

MISCELLANEOUS.

Hardy plants were in strong force on this occasion, Messrs. John Laing and Sons setting up an enormous exhibit. A splendid lot of Cannas in flower and an additional group of hardy trees, Acers, and the most attractive shrubs and such things were also included. Messrs. Wallace and Co., Colchester, had one of their interesting displays of Lilies. The very fine new kind L. Thunbergianum Orange Queen was conspicuous. The Calochorti were very fine both in quality and in numbers, and exhibit a vigour of growth and freedom of flowering that are most encouraging. Some pretty Pæonies included the lovely Lemon Queen, the incomparable Margaret Attwood with its double row of snowy white petals, and the richly coloured Mikado. Iris gigantea and I. spuria were among the species of this group. Mr. M. Prichard, Christchurch, also had many good hardy things, among which we noted Cephalaria tatarica, the white Everlasting Pea, Campanula Burghaltii, Orchis foliosa, Heliopsis patula, &c. Mr. F. G. Foster, Brookhampton Nurseries, Havant, had a fine array of Sweet Peas, something like one hundred named kinds. Another fine display was that of Messrs. Jackman and Sons, Woking, who had good hardy perennials set up in sensible bunches, with a display of Roses of nearly all sections, a very strong feature, however, being made of W. A. Richardson in large bunches in the centre of the group at front. Mr. Wm. Spooner, Woking, also had a large display of Rose blooms in boxes. Messrs. Cutbush and Sons, Highgate, had an irregular group of Malmaison and border Carnations. Messrs. Joseph Cheal and Sons, Crawley, staged hardy flowers, such as Delphiniums, Pentstemons, Pæonies, Alströmarias and the like, together with a collection of Tufted Pansies and cut examples of hardy decorative trees and shrubs. Messrs. Banyard and Co., Maidstone, had a large and varied display of Roses that included many first-class blooms, and Mr. Rumsey, Joyning's Nursery, Waltham Cross, had a large group of the new Pink Mrs. Rumsey. Messrs. Paul and Son, Old Nurseries, Cheshunt, were the exhibitors of the pretty new climbing cluster Rose Psyche, the fine rods shown being wreathed with clusters of blooms for many feet in length. The Messrs. Laxton Bros., Bedford, sent large flat baskets of several new Strawberries. Among the kinds shown were Mentmore, said to be an enormous cropper, and Thos. Laxton (new), which may be said to be an improved Royal Sovereign and an excellent market kind. L'Amiral is another new kind, and, with Monarch, said to have firm flesh and be good for packing. The French kind Louis Gauthier was also well shown, and for those who appreciate light-coloured fruit should prove acceptable. Mr. J. Williams, Oxford Rd., Ealing, had a table arranged for the most part with Roses of varying colours amid Asparagus and other foliage in profusion.

A full prize list will be found in our advertisement columns.

NATIONAL VIOLA SOCIETY.

JUNE 22.

THE display made by the members of the above society did not come up to expectations, although it was thought that by bringing the exhibition into the precincts of the City of London, where the majority of amateur exhibitors are daily engaged, a larger number would exhibit, and, at the same time, City men be brought into contact with a hardy flower which it was thought so many were interested in. Although the show was brought to the people, advantage was not taken of its nearness, but this may have been owing to the fact that payment for admission could not be made at the doors, the only means of entrance being by tickets obtained beforehand.

The display was held in the Great Hall, Winchester House, Old Broad Street, E.C., and although but of limited extent, was interesting. The trade was ably represented by two splendid displays not for competition, but the open classes were very poorly filled. The chief interest was centred in the amateur exhibits, and these were of a varied character. There were very few fancy Pansies staged, the Tufted Pansies again predominating. Decorative exhibits, which were catered for on this occasion, found only one representative, so that, taken as a whole, the show must be considered altogether unsatisfactory.

OPEN CLASSES.

The leading classes for forty-eight sprays Violas and forty-eight sprays or bunches of Pansies respectively found no entrants. The class for twenty-four fancy Pansies, distinct, found Mr. J. Smellie, Busby, near Glasgow, leading with a tray of very nice blooms, some of which were of exceptional beauty. His best blooms were J. P. Tait, Colonel M. R. G. Buchanan, Amy Barr, Mrs. W. Steele, Geo. Stuart, R. C. Allen, Marmion, W. H. Clarke, Susan Stuart, Miss Niel, Mr. Mandrill, Maggie Watson, and others. The only other exhibitor, who was placed second, was Mr. A. Ollar, Kilkerran, Campbeltown, N.B., who had a nice lot of blooms, Colonel Buchanan, John McGee, W. H. Clarke, and Miss Niel being his best sorts. In the class for twelve fancy Pansies, distinct, Mr. Smellie was again first with a neat and even lot of flowers, Lord Dunraven, John McGee, Julia (fine), Colin Pye, Colonel M. R. G. Buchanan, Maggie Watson, and Susan Stuart being above the others in point of merit. Mr. Ollar was also second with a good lot of blooms, Col. Buchanan and J. P. Tait standing out above the rest. There was only one competitor in the class for twenty-four sprays Violas, distinct, six blooms in each, this being Mr. Smellie, who was awarded first prize. This was a very handsome lot, each individual spray being represented by large, clean, fresh and nicely coloured flowers. The most noteworthy among them were White Empress, A. J. Rowberry, Lemon Queen, Cissy Mellowes (syn., Mrs. C. F. Gordon), Stobhill Gem, Princess Ena, Nellie, Lizzie Paul, Dorothy, Lark, Goldfinch, Duchess of Fife, Liz. Barron and Duchess of York. First prize was awarded in this instance, as it was again to the same exhibitor in the next class for twelve sprays rayless Violas, distinct, this being the only stand. The flowers were very fine. A special class for six vases of Violas, distinct, found only one competitor, Mr. J. Smellie being awarded second prize for a nice lot of blooms arranged in suitable vases with Maiden-hair Fern.

AMATEUR CLASSES.

It was in this division where the best competition took place, but even here there were several instances in which there was only one exhibitor, although the stands of blooms were of a high order of merit. For twelve Pansies in not less than six varieties, Mr. A. Ollar was the only exhibitor, and was awarded first prize, B. Doulton, Marmion, W. H. Clarke, Col. Buchanan, Susan Stuart and Miss Niel being his best flowers. There was a better competition for six sprays Violas, distinct, six blooms in each spray. Dr. A. H. Beadles, Sydenham, S.E., was placed first with a neatly arranged and clean lot of blooms of good quality. The varieties staged were William Tell, Katie Bell, Primrose Dame, Devonshire Cream, Lark and Pembroke. Second prize fell to the lot of Mr. W. E. Reeve, Woking, Surrey, Goldfinch, Primrose Dame and Blanche being distinctly good. Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., was the only exhibitor in the respective classes for six sprays rayless Violas and six sprays rayed Violas, six blooms in each. The former were very pretty, and included a splendid rayless yellow flower in the way of Pembroke, but larger, Flrizel, Ophelia, and other seedling sorts. In both classes Mr. Crane was awarded first prize. For three sprays, distinct, three blooms in each spray, Mr. L. Brown, Seven Arches, Brentwood,

Essex, was first with a very fine lot of flowers, Mrs. C. F. Gordon being grand. Mr. D. B. Crane was second. For three sprays Violas, rayed, distinct, Mr. Crane was first, having Lord Salisbury and two seedlings. Mr. J. M. Read, Winchmore Hill, N., was second with smaller flowers, Goldfinch being his best. Dr. A. H. Beadles was first for three sprays rayless Violas, having Primrose Dame, Blanche and Devonshire Cream in good form. Mr. Crane followed closely. The last-named exhibitor led for three sprays miniature-flowered Violas, distinct, having these little flowers beautifully represented, King of the Blues, Walter B. Child and a yellow seedling being the sorts staged. Mr. B. G. Sinclair, Highgate Road, N.W., was second with a less even lot. For three sprays yellow, the contest was keen, Mr. Reeve winning first prize with a fine lot of flowers. Lizzie Paul, A. J. Rowberry and Pembroke were the varieties shown. Mr. Leonard Brown was a good second, the blooms being somewhat rough. The last-named exhibitor was first for three sprays white, distinct, these being some of the best flowers in the exhibition. Blanche, Nellie Cruse and a rayed variety were those shown. Mr. Reeve was placed second with a nice lot of flowers. For three sprays edged Violas, three sprays of Countess of Kintore type and three sprays of any other colour, Mr. D. B. Crane was placed first, having seedlings of promise in each class in addition to sorts in commerce. For a table decoration, the prizes for which were offered by Mr. W. Sydenham, Tamworth, Mr. Crane was the only exhibitor, arranging with taste yellow and white Violas with grasses, sprays of Hawthorn, Maiden-hair Fern and other greenery in small tubes and glasses, &c. This was awarded first prize.

TRADE DISPLAYS.

In this department Mr. William Sydenham, Tamworth, Staffordshire, excelled, and for an exhibit of forty-eight sprays Violas, together with a large number of neat little rustic silver-plated table decorations arranged with Violas, was awarded a silver-gilt medal. The most noteworthy sprays of Violas were Nellie Cruse, Niobe, a lovely white, rayless, awarded a first class certificate: Virginus, pale blush; Symphony, white; Cottage Maid, a good fancy; Primrose Dame; Melampus, a grand rayless yellow sort; Mandarin, Ophelia, Britannia, Bouncer, A. J. Rowberry, Mrs. C. F. Gordon and Kitty Bell, and a pretty little miniature, Minnie Warren, of a lavender shade, was also admired. Messrs. Cheal and Son, Lowfield Nurseries, Crawley, Sussex, had a superb display. These were set off with sprays of Maiden-hair Fern in a tasteful manner. New and old sorts were about equally balanced in this display, and it was quite an object-lesson to compare the old and new varieties. A silver medal was awarded.

Royal Gardeners' Orphan Fund.—We are requested to state that the annual dinner of this institution will be held in the Hotel Metropole on the evening of July 18. Alderman Sir Reginald Hanson, Bart., M.P., in the chair.

Royal Horticultural Society.—International Conference on Hybridisation, Chiswick Gardens, July 11.—The ordinary committees of the society will meet at Chiswick, on Tuesday, July 11, at 12 punctually, and plants, &c., for certificate will be placed before them as at the usual meetings in the Drill Hall, but with the exception of plants, &c., for certificate and hybrids and their parents, no other plants, &c., may be exhibited on this day.

The weather in West Herts.—During the past week the day temperatures have been as a rule below the average, while the nights, on the other hand, have been mostly warm. Both at 1 foot and 2 feet deep the ground is at the present time of about seasonable warmth. Rain fell on five days of the week, and to the total depth of 2 inches. More than half of this fall was deposited

on the 30th ult., when the measurement for the twenty-four hours ending 9 a.m. on the 1st inst. amounted to nearly 1½ inches, or more than in any day since July 18, 1895. The heaviest down-pour occurred at 2 a.m., when in a quarter of an hour four-tenths of an inch fell, or at the mean rate of over 1½ inches an hour. June proved remarkably changeable as regards temperature, but taken as a whole it was a warm month. Rain fell on but six days, all after the 17th, the aggregate fall amounting to nearly 2 inches, which is about a quarter of an inch short of the June mean. The sun shone brightly on an average for about 7½ hours a day—making this the brightest June for twelve years. It was also very calm; in fact, calmer than the same month in any of the previous thirteen years. The Rose Marie Bauman came first into blossom in my garden on the 27th ult., or one day later than its average date of first flowering in the previous eleven years, but a week earlier than last year.—E. M., Berkhamsted.

NOTES OF THE WEEK.

Everlasting Peas.—The perennial or Everlasting Peas in one or two varieties are now among the finest of old-fashioned garden flowers, the pure white kind being of especial value, not merely in the garden where it blooms long and continuously, but also for cutting.

Silene alpestris.—Spreading cushions of this plant have of late been quite a sight with the pure white flowers, which, if small, appear in great profusion. The plant, fortunately, is of the easiest culture, though at all times preferring a deep soil. Seeds usually germinate quite freely.

Heliopsis patula.—Among the early-flowering composites this is a good and attractive subject, the rich golden orange hue being very fine. It is, however, not a large-headed flower, though belonging to a group lending itself freely to improvement. The habit is by no means coarse, which is in its favour.

Hybrid Columbines.—One point that is at least forced upon the observer is quite noticeable in these plants. It is the apparent standstill that at present exists in so far as the raising of new shades is concerned. A dozen years ago many pretty shades were appearing, but now these to all appearance have reached their highest point.

Campanula Burghaltii.—This showy Bell-flower is now in bloom, and of the section to which it belongs is certainly one of the finest. It is perhaps scarcely so pale in colour as C. van Houttei, to which it would appear nearly allied, and is also somewhat stronger. Where it succeeds the latter is the more frequently favoured for the border, and it is certainly a deserving plant.

Rose Gustave Regis.—Among so-called garden or decorative Roses this would appear to be an especial favourite, if one may take the frequency with which it is included in almost every exhibit of these kinds. That it is a popular as well as a free-growing kind there is no doubt, and for the garden just the kind that pleases both by its freedom and its colour. Its long buds tapering almost to a needle point render it of value also as a button-hole flower.

Tropæolum Leichtlini.—In your issue of June 24, p. 457, I see a note on Tropæolum Leichtlini. I quite agree with the praise bestowed by the writer on this fine plant, but I think he is mistaken in speaking of it as a distinct species. It is a hybrid between T. polyphyllum and T. edule, obtained five or six years ago by M. Leichtlin, of Baden-Baden. It was figured in the *Revue Horticole*, 1897, p. 409, from plants that flowered in my garden.—M. MICHELI, Geneva.

The Strawberry crop.—The South Hants Strawberry growers have a very light crop this season, and although prices keep high it will by no means repay them so well as a good crop at lower rates, for the average yield is not more than one-third. It is difficult to account for such a failure, but my impression is that last season's drought so weakened the plants that they had not time after the rains came to mature their crowns; consequently the bloom was weak and failed to set.—J. G., Gosport.

Fatsia japonica ripening seed.—In consequence of the very mild winter this shrub was in full flower in January, and numerous large flies buzzing

among them reminded one more of June than mid-winter. The plants ripened a full crop of seed, from which I have raised many young plants. I shall be glad to hear from any of your readers who have been successful in ripening seeds of this Japanese shrub in the open air. Single specimens or clumps of this should be planted in all favourable localities, as its large digitate leaves give a warm appearance to the landscape in mid-winter.—W. O., *Fota*.

Ourisia coccinea.—Since writing the recent note on this brilliant flower I have seen it doing well in the rock garden of Mr. P. Neill-Fraser, of Rockville, Murrayfield, Edinburgh. It is grown there in the pocket of a sheltered rockery but a few yards above the level of a pond. One meets now and again with exceptional gardens in which *O. coccinea* does well, but in the majority of instances it refuses to bloom.—S. ARNOTT.

Campanula pulla at Kaimes Lodge.—One sees so many places where, from various causes, this beautiful little Bellflower, or Harebell, grows so indifferently that it is always a pleasure when one sees it growing into a mass. It is then that its beauty can be properly appreciated. At Kaimes Lodge it is delightful to see how quickly it has become established in the rock garden in such a comparatively short time. Some sheets of its deep blue drooping flowers looked very fine recently.—A.

Coronilla iberica.—This is ever a favourite when seen in bloom with its clustered yellow flowers hanging over a ledge in the rock garden. Like many other plants, it resents being overshadowed by other flowers or shrubs, and may be lost if overgrown by its neighbours. One of the easiest ways of raising a stock is by means of seeds. Small seedlings planted out have often a much better chance of doing well than older plants unless the latter are in pots and can be turned out without disturbing the roots.—S. A.

Campanula persicifolia alba grandiflora.—This is decidedly the finest of the Peach-leaved Campanulas in so far as its flowering is concerned. In some soils, however, and those more particularly of a very light character, the plant does not increase with the freedom of its kind, and in one or two instances the stock has perished and had to be renewed. It would appear there is more than one form of this handsome plant, one greatly inferior to the other. The finest form is usually known as Backhouse's variety. This is a grand garden plant, the stems being literally hidden with snow-white flowers.

The Oriental Poppies.—I recently saw several of the newer Oriental Poppies sent from Newry. Of these I thought Cherry Ripe among the prettiest. It was brightly coloured. I also liked in its way one called Darkness, the deepest maroon of any I have seen. Carminum was also good. Pictum, with salmon-pink flowers, is also pleasing, and so is Lilacinum. The flowers were comparatively small, a point of value for some purposes. For purely decorative effect the large-flowered bright forms are of most value in the garden. *Papaver orientale bracteatum* remains almost unequalled for this purpose.—S. A.

Incarvillea Delavayi.—Those who a year or two back had fears concerning this plant may be glad to know that in Messrs. Wallace's nursery at Colchester the flowering stems are fully a yard high, and the richly coloured flowers most profuse. Cut spikes from Colchester have been set up at the Drill Hall on each occasion during the past few weeks with stems quite 18 inches long. Stronger plants that have been left alone are even more vigorous, and still flower continuously. The plant is so distinct, that the news of its great vigour is welcome. The plant seeds freely, too, so that it is likely soon to be quite plentiful in gardens generally.

Deutzia Lemoinei.—I am pleased to observe that "W. D. R. D." has been more successful with this *Deutzia* than some of us have been. I hope to see his plant before long, when I may be able to receive some guidance which may lead to my being more successful than hitherto. Al-

though "W. D. R. D.'s" garden is only a few miles from here, and also close to the sea, there is, I believe, some difference in the temperature. Here it is only in exceptionally mild winters that I have been able to grow *Cotyledon* (*Echeveria*) *glauca* in the open, but in his garden it forms a fine group quite hardy at the foot of a rock, at the base of which is a pool.—S. ARNOTT, *Carse-thorn, by Dumfries, N.B.*

IXIA viridiflora.—The shade of colour in this is quite remarkable in the tone of green, and as rare as it is remarkable. It is difficult to give expression to the colour, which is a pale or very delicate peacock-green, or perhaps sea-green is a nearer approach, and shaded with grey. Then, as rendering the flower all the more conspicuous, is the intense blackish violet-purple base internally. The soft silken touch of the slightly pendent blossoms is also a feature. When cut, the *IXIAS* are even more valuable than in the garden perhaps, though the brighter shades of colour play a rather important part in such decoration. The frail stems render the plant especially useful in the cut state.

Finely-grown Humeas.—Possibly no finer or better cultivated plants have ever appeared in any exhibition than was the case at the Drill Hall last week. Plants of 12 feet or more high, with the fine bronze-tinted plumes so freely developed, are indeed of rare occurrence. The notion of exhibiting Humeas and Crotons mixed is certainly not a common one, and the effect was unique, for it was one of the most attractive groups that has ever graced the Drill Hall. Such plants tend to show what may be accomplished by timely potting and liberal culture from the first, as no Humea, once it gets into a hide-bound condition of the stem, can ever make such a perfect example as were the plants referred to.

Eurothera fruticosa Youngi.—Comparatively common as are the varieties of *E. fruticosa*, they are indispensable in the flower border at this season. Unlike the true Evening Primroses, they are at their finest when their bright yellow blooms are lightened up by the sun. They do not require full sun to give them brilliancy, but it seems to give them that glowing appearance which makes them so summer-like. (*E. Youngi* does not differ much from *Fraseri*, and is a capital border plant for a soil which is not too heavy, but where it is not allowed to flag and droop in dry weather. In a border here it grows about 3½ feet high, which is quite as tall as I care to have it.—S. ARNOTT, *Carse-thorn, by Dumfries, N.B.*

Notes from Yorkshire.—For the last twenty years the Red Chestnuts (*Pavia rubra*) have not flowered here so luxuriantly as this year. They remind me of the beautiful avenues at Baden-Baden. The Rhododendrons also have been very fine. Against the house walls I have now in bloom *Solanum crispum*, *S. jasminoides*, *Olearia Gunni*, *Loasa lateritia*, and *Calampelis scaber*. *Carpenteria californica* and *Tropeolum speciosum* are beautiful. *Eremurus* raised from seed sent to me by Mr. W. E. Gumbleton is just going over. *Linnaea borealis* is covered with its pretty bells, and *Trientalis* has had several of its white stars. The above plants cover a wide geographical range, yet all are thriving here.—R. MILNE-REDHEAD, *Holdendough, Bolton-by-Bowland, near Clitheroe.*

Pyrus coronaria flore-pleno.—*Pyrus coronaria* is one of the *Malus* (or Apple) section of the genus, and is a native of the eastern side of North America. From the other species of the same section it is distinguished by the frequent lobing of the leaves, the charming fragrance of its flowers, and the late date at which they appear—i.e., the latter part of May. This double-flowered variety has all these attributes, but it is, besides, far superior to the type in the size of its blooms. Some I measured recently were well over 2 inches in diameter, and having two or three rows of petals, they formed very striking and beautiful clusters. This is, indeed, probably the finest *Pyrus* in existence as far as the individual flower is concerned. The colour is rose, tinted

white, and the trees are in full leaf at the time of flowering. It is decidedly a tree to be noted by planters.—W. J. B.

Saxifraga mutata.—One does not frequently meet with this Rockfoil, which I saw at Kaimes Lodge, Murrayfield, the other day. With me in the west of Scotland it seems to be more difficult to keep in winter than in the east, where the climate is drier. Mr. Lindsay had a nice tuft in his rock garden the other day, when its orange-yellow flowers, with crimson anthers and pistils, made a pleasing sight. There is a good, if rather highly coloured, plate of this Rockfoil in the second series of Wooster's "Alpine Plants" (plate xxxix.). As stated in that work, the flowers, which open saffron or orange colour, pass off to pale yellow. One cannot but regret that *S. mutata* is rather a difficult subject for wet districts. It belongs to the section *Euaizoonia*, and was introduced about 1779.—S. A.

Philadelphus microphyllus.—Like many other plants from which hybrids have been raised, this species is better known in gardens by its progeny than it is itself. It is from this species that the beautiful Lemoinei race of *Philadelphus* has been partly derived. The species itself is the most distinct in the genus. Many of the *Philadelphus* in gardens run so much one into the other that it is difficult to say where one ends and another begins. But it is different with this; a great gap separates it from any other. It is the dwarfest *Philadelphus* and has the smallest leaves. It forms a round bush, 2 feet to 3 feet high, of very dense leafy habit, the leaves being of a grey-green colour and about the size of Box leaves. The flowers are each a little over 1 inch across, pure white, and possess a fragrance that is sweeter than that of any other *Philadelphus*. It needs a sunny position and a soil that is not more than moderately rich.

Halimodendron argenteum.—Having been introduced to Britain from Siberia 120 years ago, this shrub may now be considered an old garden plant, yet it is by no means a common one. Of its value, greater proof is being afforded this year than ever I have seen before. It is flowering with the greatest freedom, and its charming pink blossoms hang in profusion on the graceful pendent branches. The leaves are of a grey colour and consist of four leaflets arranged pinnately, the leaf-stalk ending in a spine. Belonging to the Leguminosae (and nearly related to the Caraganas), this has pea-like flowers borne not more than three together on slender stalks. Their pink, or purplish-pink, colour accords well with the grey foliage. It is not often that a good word can be said for grafting as adapted to hardy trees and shrubs, but it is useful in the case of this *Halimodendron*. It is not an easy plant to raise from seed, being so apt to damp off during the first or second winter before it has had time to become woody. The best plan with it, therefore, is to work it on *Caragana* or *Laburnum* stocks. These should be 3 feet or 4 feet high, so as to show off its exceedingly graceful mode of growth.—B.

Making bouquets (N.).—We know of no book on the subject you mention. The articles you want can be supplied by any horticultural tradesman.

Names of plants.—Suffolkian.—Should like to see better specimens; too shrivelled to identify.—*A. Bowles.*—*Clematis montana* probably.—*Alice Wilson.*—Sweet Chestnut.—*J. R. Jefferies.*—1, *Panercium* sp.; 2, *Oreth maculata*.—*J. L.*—*Rosa alpina*.—*A. Kingsmill.*—*Olearia macrodonta*, New Zealand (also called *O. dentata*).—*M. M.*—1, *Cistus hirsutus* var. (white); 2, *Campanula Rapunculoides*; 3, *Cistus villosus* (red); 4, *C. hirsutus*; 5, *Oxalis vespertina*; 6, *Saxifraga aizoon* (white); 7, *Dianthus crenatus*; 8, *Saxifraga aizoides* (yellow).

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INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—		Philadelphus grandiflorus .. 37	Garden Flora:—	Laelio-Cattleya Aphrodite .. 45	Ferula tiogitana .. 51
Apple Emperor Alexander .. 34	Robinia neo-mexicana .. 38	Cymbidium Traceyanum .. 42	Laelio-Cattleya Dominiana	Garden, notes from a Cornish	Garden, notes from a Cornish
Cherry Rivers' Early Black .. 35	Spirea bracteata .. 38	Kitchen:—	var. Frances Mary .. 47	Incarvillea Delavayi in shade .. 52	Incarvillea Delavayi in shade .. 52
Gooseberry Leveller .. 35	S. ringa Emodi .. 38	Broccoli, planting .. 44	Odontoglossum crispum var.	Lathraea squamaria .. 51	Lathraea squamaria .. 51
Gooseberry Rough Yellow .. 35	Flow-er:—	Cauliflower grub, the .. 41	Lily .. 45	Nicotiana sylvestris .. 51	Nicotiana sylvestris .. 51
Gooseberry trees, caterpillars	Aster Stracheyi .. 39	Cauliflowers, early .. 41	Odontoglossum Harryano .. 47	Nymphæa stellata .. 51	Nymphæa stellata .. 51
on .. 34	Aster Stracheyi .. 39	Lettuce Continuity .. 44	crispum .. 47	Philadelphus microphyllus .. 51	Philadelphus microphyllus .. 51
Grape Lady Hutt .. 35	Canterbury Bells .. 41	Pea Dickson's Fertility .. 44	Odontoglossum Schleiperi .. 45	Rose Fellenberg .. 52	Rose Fellenberg .. 52
Melon Royal Favourite .. 34	Clematises .. 39	Pea Michaelmas .. 42	anum .. 45	Rose White Maman Cochet .. 51	Rose White Maman Cochet .. 51
Peach Dagmar .. 35	Delphiniums, seedling .. 41	Peas, early .. 44	Oncidium iricirum .. 45	Rubus deliciosus in fruit .. 51	Rubus deliciosus in fruit .. 51
Peach Thomas Rivers .. 34	Erenurus himalaicus .. 42	Peas, late .. 43	Oncidium Lanceanum .. 45	Salvia carduacea .. 52	Salvia carduacea .. 52
Peach trees, current work	Flowers, border, at the Temple	Potato Famous .. 43	Books:—	Saxifraga Hirculus major .. 51	Saxifraga Hirculus major .. 51
among .. 34	Gladiolus Early Ackerman .. 40	Tomatoes not setting .. 45	"Album des Orchidées" .. 47	Verbascum Hookeri and V.	Verbascum Hookeri and V.
Peaches, stone-splitting in .. 35	Iris tingitana .. 42	Week's Work:—	Murray's "Hand-book of	Lychnitis .. 51	Lychnitis .. 51
Pear Fertility .. 34	Lilies and Irises at the Temple	Fruits under glass, work	Somersetshire" .. 47	Veronica paniculata .. 52	Veronica paniculata .. 52
Plum Belle de Louvain .. 35	Mimulus Burnettii .. 41	among .. 45	Stove and Greenhouse:—	Veronica sibirica .. 52	Veronica sibirica .. 52
Strawberries and the drought	Myosotis, propagating .. 40	Kitchen garden, work in the	Acalypha Godseffiana .. 43	Public Gardens:—	Public Gardens:—
Strawberries, scarcity of .. 34	Newry, notes from .. 40	45	Adenocalymma nitidum .. 48	Dalston, public garden for .. 52	Dalston, public garden for .. 52
Vine borders, air for .. 33	Pæonies, herbaceous .. 41	Orchids:—	Coleus Beckwith Gem .. 43	Open spaces .. 52	Open spaces .. 52
Destroyers:—	Pæonies, planting .. 41	Cattleya gigas .. 47	Cyperus fertilis .. 48	Miscellaneous:—	Miscellaneous:—
Pear tree destroyer, a .. 35	Pansies, Tufted, some of the	Epidendrum radiatum .. 45	Societies:—	Apple tree unhealthy .. 52	Apple tree unhealthy .. 52
Trees and Shrubs:—	newer .. 41	Lælia purpurata var. Mrs.	Royal Horticultural .. 49	Ferns, hardy non-British .. 52	Ferns, hardy non-British .. 52
Cytisus præcox .. 37	Plants, rock and dwarf, at	R. I. Measures .. 45	Notes of the Week:—	Notes, Californian .. 49	Notes, Californian .. 49
Cytisus præcox .. 37	the Temple .. 39	Lælia purpurata var. Mrs.	Campanula carpatia (R. vers-	Plants, bulbous, at the Tem-	Plants, bulbous, at the Tem-
Deutzia discolor purpurascens	Plauts, hardy, notes on .. 39	R. I. Measures .. 45	lea variety) .. 51	ple show .. 33	ple show .. 33
Devon, trees and shrubs in	Polygonum baldschuanicum .. 42	Lælia purpurata var. Mrs.	Canterbury, hailstorm at .. 51	Vines, red spider on .. 52	Vines, red spider on .. 52
bloom in .. 37	Sempervivums at Rockville,	R. I. Measures .. 45	Notes of the Week:—	Water Lilies, insects on .. 52	Water Lilies, insects on .. 52
Elms, the two .. 38	Edinburgh .. 42	Notes of the Week:—	Campanula carpatia (R. vers-	Weather in W. Herts .. 52	Weather in W. Herts .. 52
Escallonia langleyensis .. 38	Stocks, East Lothian .. 42	Campanula carpatia (R. vers-	lea variety) .. 51		
Genista cinerea .. 38		Canterbury, hailstorm at .. 51			

ORCHARD AND FRUIT GARDEN.

AIR FOR VINE BORDERS.

IN our anxiety to secure a fertile soil and enrich it with the constituents essential for the Vine, I fear we omit considering some of the conditions necessary to preserving the mass sweet and enabling it to yield all the plant food it is capable of under favourable circumstances. Thirty or forty years ago some provision was made whereby every Vine border could be well aired. This important item in Vine culture does not now seem to receive the attention it did then, for it is nothing new to find a solid brick and lime wall forming the boundary of the borders. The borders, too, instead of being raised, are frequently kept low and level. Borders of this kind can only be aired from above—by the water supplied to moisten them driving out the air between the particles and taking its place, fresh air getting in as the water percolates through to the drainage. With dry seasons and a porous soil well drained, the air in the borders will thus be frequently changed, but the question still remains, is this enough? Even were it so, what about wet localities and borders consisting chiefly of heavy loam or loam approaching clay? Borders of this impervious nature hold moisture longer than more porous ones, and consequently will seldom need watering, whether rains can reach them or not. In the absence of sufficient air among the particles of soil, &c., the border is cold, sluggish in giving up plant food, has a tendency to acid properties, and becomes unsuited to the healthy growth of the roots of the Vine. Change these unsatisfactory conditions by providing a means for the atmospheric air playing through the soil, and the gases of which the air consists will break up quantities of the insoluble compounds and enrich them with their own manurial constituents. Besides this, the solubility of valuable substances is secured, heat imparted to the earth by the chemical actions which take place, and anything approaching

sourness avoided. Knowing this, the airing of Vine borders should receive as much attention as the draining of them does. In low-lying situations, especially in wet localities, perhaps the best plan to adopt in the formation of Vine borders would be to keep them wholly above the level of the surrounding ground. Those outside the houses could be finished off with a grass slope kept well cut during the summer months, and which would look much nicer than brick and mortar walls. Drain pipes surrounded by a few stones could intersect the borders from back to front, and be placed at different levels to admit air. The wall at the back of the border and inside the house could be honeycombed and built a few inches from the wall against which the house was placed. By this means a current of air could be got to play right through the whole of the border. In drier situations and with sandy soils the borders might be kept lower, but a similar arrangement to the foregoing for securing air passages should always be obtained. In renewing any existing borders which are bricked round, it would be wise to form marginal walls to the border of turves a foot or so within the brick and lime one. Some borders I have seen were all above the ground-level outside, and were limited in extent by turves receding from the ground to the surface of the border. This was an excellent plan, only there was a conspicuous absence of tidiness about it. Every case requires to be dealt with on the spot, as new difficulties arise at different places, awakening fresh channels of thought in devising means to overcome them. The suggestions in the preceding remarks may, however, serve as a base to work upon, and when well-aired borders have been assured, all other things being satisfactory, it will be found that vigorous, healthy, fruitful growth will follow. J. RIDDELL.

Pear Fertility.—I note the remarks of "J. G." on this Pear at page 442. "J. G." says it does well as an espalier. It may in some soils and situations, but with me in a light, porous

soil with the roots well mulched it was a complete failure. I had no fault to find with the crop, as it never failed to yield abundantly, but just before the fruit was fit for gathering decay set in all of a sudden, and that not at the core only, but right through the fruit. Where the fruit remains firm till ripe, there can be no doubt of its usefulness, as it is such a persistent cropper, of useful size and fair flavour; just the Pear, in fact, for amateurs and those with only limited space.—J. C.

Gooseberry Leveller.—This is a remarkably fine yellow Gooseberry, and, unlike some of the large Lancashire varieties, is excellent in point of flavour as well as size and appearance. Leveller is a capital poor man's Gooseberry, and has succeeded admirably with me year after year on a light soil. I had the roots well mulched in spring and watered several times during summer, for there can be no doubt that were Gooseberry roots kept more moist there would be fewer complaints of insect attacks and blight. The fruit of Leveller is delicious for dessert about the end of July. It hangs on the tree better than the majority of sorts and is less liable to split in changeable weather. If the berries are thinned out when young and one or two good waterings with liquid manure given, it will prove one of the best exhibition sorts in cultivation.—N. N.

Strawberries and the drought.—From many quarters complaints come about Strawberry plants giving way and the fruit becoming hard and brown when little more than half grown. This is especially the case where the soil is light and shallow. In a few favoured localities copious rains fell recently, but in others the soil is scarcely more moist than it was last autumn owing to a comparatively rainless winter and spring. No wonder then that Strawberries under ordinary treatment show signs of distress. I do not say that where, say, acres of this fruit are grown this premature collapse can be avoided, but in private gardens and market gardens of limited extent the evil might be met by timely mulching. I say timely, as I find that the majority of growers postpone the operation till the plants are coming into bloom. In average seasons and in fairly strong, retentive soils no harm occurs from the delay, but in seasons like the present, light, porous soils lose what moisture

they had before the mulch is applied, inferior crops being the inevitable result. I contend that it is not wise to postpone mulching later than the beginning of February, as that month is frequently dry and windy, and speedy evaporation leaves the roots of Strawberry plants insufficiently moist for the formation of stout, vigorous bloom-trusses, but when timely mulching is practised, what moisture there is is preserved and the roots get the benefit of it. If an early and liberal mulch is given, it is rarely necessary to water the plants except in exceptionally dry seasons.—B. S. N.

CATERPILLARS ON GOOSEBERRY TREES.

CAN you tell me why caterpillars attack some Gooseberry trees and not others? I have recently taken charge of a garden, and some of the trees have hardly a leaf on them, all being eaten away by caterpillars. My employer tells me the trees were the same last year. I have picked the Gooseberries, so I have a chance to syringe them with anything you advise.—W. F.

** The reason for some bushes being attacked by caterpillars and others escaping must be a purely local one, my experience being that none are safe. Possibly those most infested are the nearest to frequented walks, and friendly birds may be scared by passers-by from coming to the bushes and clearing the grubs away. Unless the number of bushes is too great, the very best remedy is to look them over daily and hand-pick the caterpillars from the time the first attack is noticed until no more are to be found; but these pests are so voracious, that the value of this method lies in the immediate application, and a watchful eye is needed. It really takes very little time for a boy to clear a plot, for though the pests are to some extent concealed by their colour and the positions they take up, the eye soon gets accustomed to detecting them readily. Dusting with soot and lime in a dry state while the bushes are wet with dew has some deterrent effect; dry road grit frequently applied acts in the same way. As "W. F." has cleared off the fruits, an application of hellebore powder will prove very destructive to the caterpillars and can do no harm, but this remedy, though a very effective one, I never like to recommend for fruit trees or bushes, as the powder is so poisonous. If the bushes are too thick to be really cleared by hand-picking, shake them vigorously now and then and kill the caterpillars which fall with the back of a spade. I have never found any solution of insecticides very effective when syringed on, though a fairly strong solution of soft soap, into which some flowers of sulphur has been stirred, applied early enough appears to check the deposit of eggs. It is too late for this now, however. I should advise that a clearance of the top 3 inches of soil be made in the winter, replacing this with some fresh soil; then in early spring cover the surface with 2 inches of fresh tan. Tan has been proved over and over again to be the most effective application, and its effect appears to last for several years. The same effect has been claimed on behalf of a heavy dressing of soot to the soil, but I have not found its effects so lasting.—C.

Apple Emperor Alexander.—No doubt many after seeing this handsome-looking Apple at exhibitions have been induced to plant it in their own gardens, only to be disappointed with its behaviour. It requires very careful cultivation and pruning with judgment, it being one of those Apples which fruit largely on the points of the shoots. The best way for standard trees is to carefully thin out the wood annually and shorten back any growths that may have taken the lead. Even standards are unsatisfactory from a cropping point of view in many gardens, cordons and espaliers even with judicious root-pruning sometimes remaining almost barren for years. When fine fruits are obtained, few varieties surpass it for showing in November, but when kept for a longer period they quickly lose

weight and quality too. As a market fruit it is too tender in the skin unless disposed of near home.—C. N.

Peach Thomas Rivers.—This new Peach was shown in quantity by the Messrs. Rivers at the meeting of the Royal Horticultural Society at the Drill Hall on June 27, and was much admired. There were several trees of this variety in pots, and the quantity of fruit each tree carried and the size of the fruits were sufficient evidence that this new Peach is a grand cropper when forced in pots. Some may say that we do not need such large Peaches which invariably lack flavour. I have always found large Peaches with the colour of Thomas Rivers much admired on the dessert table, and growers for market know which pays best. I had an opportunity of tasting this variety last June twelvemonth, when it was given a first-class certificate, and it was very good indeed. I think this is a good addition to our Peaches. If it proves suitable for the open wall it will be most valuable.—G. WYTHES.

Melon Royal Favourite.—One of the most reliable all-round Melons I have grown of late years is Royal Favourite. It has a good constitution, sets freely in pits or houses, swells its fruit up to a good size, is of handsome shape, and well netted. Surely these are the attributes of a good Melon. I may be told that these count for nothing if the flavour is not satisfactory. Flavour in Melons is beginning to be regarded as a most uncertain quality. Fruits have been grown in hundreds of cases and placed before judges, both at the Royal Horticultural Society's shows and committees and in the provinces, that when tasted were very poor as regards flavour. It is quite true that Melons need to be treated with some amount of judgment before deciding on cutting them. A day too soon or too late makes a deal of difference, and to this may be attributed many disappointments. Some kinds ripen up more quickly than others. Royal Favourite needs a good time to soften throughout from core to skin, and a cool fruit room develops flavour better than hurrying the fruit on the shelves of warm houses, as some do. Royal Favourite is a good keeper, though it is not one of the tough-skinned varieties. The flesh is white or a greenish white. It is too late for sowing Melons, except in a few cases, but those who are on the look-out for a good all-round Melon and have not given this one a trial, should note it for future growth. To my mind it possesses every good quality, including flavour, provided it is well grown and is given time to mature perfectly.—W. S.

Scarcity of Strawberries.—I have never seen such a poor crop of Strawberries. This is anything but local, as I note growers in various parts of Kent and Middlesex have lost a good portion of their crop. In later districts the crop is better, as it was the early bloom that suffered, and no one can wonder at this with the low temperature that prevailed for quite ten days during the setting period. A quarter of plants that should have produced 4 cwt. to 5 cwt. of fruit this year gave me 60 lbs. Unfortunately, the best fruit was destroyed. One grower told me that instead of clearing a ton of fruit, about 2 cwt. would be the crop, and this only seconds. There is no scarcity in some places, as I note the market is well supplied from the southern parts of the country, but in this—the West Middlesex district—the crop is much lighter. It would be interesting to know how general this failing is. In the north there was less frost, and of course with later bloom there are no losses. In light soils the plants made less growth than usual, owing to the protracted drought last season, and fewer crowns were formed, this affecting the crop. It is surprising how some varieties succumb to frost and drought. For instance, Royal Sovereign, having a long leaf-stalk and the flowers being much exposed, suffers badly from late frosts. Kinds with ample leafage, like Vicomtesse II. de Thury, are much less affected. This points out the value of growing more than one variety, also of having the plants in diverse positions, as often one may escape when others are injured. There

will be no lack of runners, as the loss of the crop will cause runner growth to form freely, and with a genial season next year there should be splendid crops, as the plants will make much growth. Such seasons show us the value of late kinds, which will eke out the scanty supply obtained from the early plants.—G. W. S.

CURRENT WORK AMONG PEACH TREES.

UNDER the influence of warmer weather outdoor Peach trees are now making much progress, and will require a great deal of attention for some time to come. Fortunately, aphids, which at one time threatened to prove troublesome, yielded to a thrice-repeated application of an insecticide. Red spider, which has been very much more troublesome, has also been subdued. Blister, which has, I believe, been very prevalent in some parts of the country, has affected but two trees here, and that only to a trifling extent. The most pressing work, therefore, at the present time is the tacking in or fastening back of the young shoots, together with the thinning of fruits on all heavily laden trees. Before proceeding with the first-mentioned operation give the trees a look over and remove all surplus shoots, as it often happens that a good few more are left than are actually required at the final disbudding, especially by these unaccustomed to the work. Overcrowding of the wood should always be avoided, and in no case should more be laid in than is needed for furnishing the tree with fruiting wood for next season. The observance of this rule is equally as essential to the well-being of the trees as is that of the avoidance of over-cropping. The reduction of the young shoots to due proportions having been accomplished, the next thing is to fasten them back to the wall. If the walls are wired, tying with raffia will suffice; if not, shreds and nails or young twigs of Privet are needed to hold them in place. Thinning of the fruits should be done simultaneously with the tacking in. In some places I fear there will not be much thinning to do, but in all cases where the trees are heavily laden, a reduction of their numbers to safe limits should most certainly be effected. That fine early sort, Alexandra, has again set a splendid crop of fruit. Alexandra Noblesse and several others are equally as good.

Thinning must not of course be too liberally done, as a margin must be left for any eventualities in the shape of dropping through failure to stone properly. On the other hand, if the trees are healthy and the roots in good condition, thinning may be done with a pretty free hand, but it is only those possessing an intimate knowledge of their trees and the condition of the borders in which they are growing who can thus boldly deal with them in this way. As with indoor trees, one fruit to each square foot of wall space covered by each tree is an ample number to leave at the final thinning, and this will serve as a guide to those who are in a dilemma as to what to do in the matter. If they act on this advice and leave that number, with a few to spare, they cannot go far wrong, and the surplus can be pulled off after the stoning period is safely passed. If not already done, the alleys should be loosened and a dressing of some artificial manure applied. For this purpose a mixture of bone-meal, superphosphate of lime and muriate of potash is excellent if mixed at the rate of 3 lbs. of the former to 1 lb. each of the latter, and strewn on the surface at the rate of 2 ozs. per square yard. This may be washed in should the condition of the border warrant the application of water. In any case it should be incorporated with the surface soil either by raking or forking it in. Hot weather having set in dry, the alleys will be best covered with straw litter both to conserve moisture and to prevent too rapid evaporation. A weekly examination of the borders from now and on through the summer months should be made and water applied as often as necessity arises. This is a most important matter, for if all conditions are right Peach trees require a great deal of water, and without

adequate supplies of moisture the fruits will not attain to full size. The garden engine, it is almost needless to say, should be kept at work as often as time and labour will admit, and if this is on every fine day so much the better. If this can only be done frequently the use of insecticides will not be necessary, as the fact of washing the trees frequently or daily will suffice to keep them clear both of aphides and red spider, while the usual haunts of earwigs will be rendered untenable by the oft-repeated applications of water.

A. WARD.

Peach Dagmar.—I was pleased to see mention of this Peach as exhibited by Messrs. Rivers at the Temple show. How is it that this variety is grown in so few places? I never forced it in the first early house, but found it one of the most reliable free-setting and highly-coloured sorts in cultivation. If anything it colours better than Stirling Castle and I consider the quality is average. That Dagmar is adapted for early forcing in pots is evidenced by the exhibit of Messrs. Rivers, and I would advise those who grow pot Peaches to include it in their list. There are certain of the most useful all-round Peaches which, nevertheless, seem to be almost discarded, while other capricious kinds are universally grown. Dagmar is, I think, one of them.—J. C.

Gooseberry Rough Yellow.—This is always one of the first to ripen and the fruit is already taking on a bright yellow tint, so in about a fortnight, or say the middle of July, the fruit will be ripe. Although by no means one of the largest varieties, its bright colour and delicious flavour make it much more useful than some of the larger kinds. Here the Gooseberry bushes are covered with fine fruit this year, and on espaliers, where the best flavoured kinds are grown for dessert, they have had to be thinned somewhat heavily, the thinnings of course having been used for cooking in a green state. The trees here are mulched with short manure every spring, and, should the weather prove very dry, are given one or two thorough soakings of water through the season. It is surprising what an amount of fruit can be gathered from a few well-fed trees, but in too many cases this useful fruit is left to take care of itself on poor soil.

Plum Belle de Louvain.—This Plum, I think, is likely to become a great favourite with market growers on account of its free-bearing habit. When looking through the famous Plum orchards belonging to Mr. J. Riley, of Putley Court, Ledbury, in conjunction with the other members of the Herefordshire Association of Fruit Growers, on Monday last, trees of this variety were noticed as being heavily cropped. Mr. Riley holds the opinion that it is one of the best Plums for market, and has accordingly a great number of trees of it. Intending planters of Plums would do well to make a note of this, as, in addition to its succeeding well as a standard, it also makes a fine and healthy pyramid. My trees are, I am sorry to say, barren this season, which fact is owing to sparrows having not only picked out many of the buds, but also to their having pulled the blossoms to pieces after they had opened. The fruit is large, long, oval-shaped, and reddish purple in colour, the flesh yellow. It is an excellent Plum both for preserving and cooking.—A. W.

Grape Lady Hutt.—Last season I noticed that the foliage of this Vine was rather given to scalding, and the same thing has occurred again this season, only to a much greater extent. The evil, no doubt, has been aggravated this season by the brilliant weather of the past ten days having been preceded by a long spell of dull, cloudy weather, with the wind blowing from the east and north-east nearly the whole of the time. Although such was the case, other Vines in the same house, which consist of such varieties as Lady Downe's, Black Alicante, and one or two other sorts, were but little or totally unaffected by the sudden transition, so to speak, from a dull, cloudy atmosphere to one of almost unclouded sunshine. This has therefore led me to

think that the foliage of this variety is tender and susceptible to sun-scalding while in a yet undeveloped state, and I should be glad to hear if any other reader of THE GARDEN who grows this Vine has experienced the same difficulty. Since shading the roof no further scalding has taken place. It being a strong grower, I have given this Vine more room this season, and am glad I did so, as it is carrying a fair crop of good-sized bunches. As a late white Grape it has, I think, no equal, and I am hoping to hear that the complaint I have to make respecting it may be but a passing one and confined to my own case, and not found to be of common occurrence.—A. W.

Cherry Rivers' Early Black.—This Cherry was ripe and ready for gathering on an east wall outdoors by June 15, and when the backwardness of the season is taken into consideration this further emphasises all that has hitherto been said and written as to this variety being one of the best early Cherries we have for outdoor culture. In addition to ripening at any early date, the fact that it is a vigorous grower and a free cropper must not be lost sight of. The fruits, which are purplish black in colour when fully ripe, are also large, juicy and luscious. This season the fruits have been very large. This was produced by a form of potash used in conjunction with two other manures and applied as soon as the fruit had set. Many neglect to feed Cherry trees, thinking that it is unnecessary, but I find it pays to do so, and trees of both sweet and cooking varieties are as regularly fed here as are Peaches and other choice fruits, with the result that both trees and their crops are greatly benefited thereby.—A. W.

STONE-SPLITTING IN PEACHES.

CAN you explain why the Peach I send you does not ripen satisfactorily? Several have dropped this season, each being hollow in the middle.—M. J. B.

Some kinds of Peaches are more addicted to stone-splitting than others, though it happens sometimes in a variety not commonly given to that failing. There is no particular reason for splitting of the stone, or it would be a more easy matter to advise so as to prevent a recurrence. To imperfect fertilisation of the flowers may be traced the origin of some such cases, and where this is so, there is no remedy that can be applied benefiting the present crop. The health or vigour of the tree itself affords no solution of the difficulty, because stone-splitting is not an outcome of indifferent health; indeed, the reverse is more likely to be the case. When Peaches are flowering, it is never safe or advisable to trust to chance in the setting, for without being fertilised with their own pollen or from other flowers by the aid of a camel's-hair pencil, rabbit's tail or something of a similar character, the fruit may swell away for a while, even to ripening, and then drop from premature softening accelerated by the unsound stone. In this condition the fruit sometimes falls and appears ripe, but an examination shows that it is soft only on one side, the other being congested and hard, quite unfit for dessert. It is among the early sorts that these troubles occur most frequently. Alexandra Noblesse, mentioned by "M. J. B.," does not usually have split stones, although, as previously intimated, any variety may develop this failing in a few fruits if the cultural conditions favour it.

In over-rich borders I have known some Peaches to drop when nearing the ripening period, and if they remain until they can be gathered, they invariably ripen some time before the remainder of the crop is ready, which the expert grower at once recognises as a symptom of stone-splitting. Freshly slaked lime applied in quantity sufficient to whiten the surface is a good remedy in such cases, giving it once or twice during the growing season. With trees that are over-luxuriant, root-pruning or lifting and placing the roots nearer the surface correct more than the one evil, bringing with it the lessened tendencies to split-

ting of the stone. Over-head shade from other trees hinders proper ripening of the wood, and without this neither perfect setting nor stoning can be assured. Extremes of root moisture or drought are both inimical to the progress of the tree's growth in summer, and should be as far as possible avoided, as also should strong doses of animal or artificial manure, because they stimulate an excess of vigour which is most undesirable. With a comparatively new border and healthy trees clear water is all-sufficient; it is for older trees with borders fully occupied with roots and carrying heavy loads that stimulating liquid food is necessary. Lime, however, may be given in small quantity with advantage to Peaches, as this assists the formation of the seed-shell or stone. Although I have gathered many hundreds of Peaches and Nectarines this season, I have not recognised one among them having a split stone, and this immunity I owe to the regular courses of watering with clear or diluted liquid manure as the case requires, thinly disposing the growths in training and tying, moderated temperatures, applications of lime occasionally, and daily fertilising of the flowers with a dry rabbit's tail. As "M. J. B." says Alexandra Noblesse has only a small crop and other trees are doing well, there must be some local condition to account for it, or perhaps some of the causes enumerated above may be in evidence. Unripened wood caused from over-head shade, imperfect fertilisation of the flowers, or an absence of lime in sufficient quantity may, however, give the clue for the failure complained of, and for two of them, at any rate, steps may be immediately taken to correct it for another year. Carefully lifting the trees and replanting will correct grossness, the autumn, when the leaves begin to fall, being the most suitable time. A mistake that is often made is neglecting the watering of the borders and syringing of the trees after the crop is cleared.—W. S.

DESTROYERS.

A PEAR TREE DESTROYER.

(*AGRILUS SINUATUS*.)

IN 1889 I noticed for the first time the attacks of this insect. The young shoots of a branch of an espalier Pear tree were withering. On examining the lower part of the branch I saw that the bark was slightly scaling off and was brown and dry for about a foot in length, and presented every appearance of the beginning of a canker. Thinking I had to deal with a fungus, and in order to try and heal the injured branch, I cut away the bark from the wood and plastered the wound with vegetable mould moistened with Bordeaux mixture. The branch soon healed and is still alive. Some months afterwards I found other branches presenting the same appearance. Being surprised to find so many branches attacked by canker, I examined them more closely, and on carefully raising the bark I noticed a winding gallery formed by a larva, and on continuing my examination I found a larva which had all the characters of a larva of one of the Buprestidae. After this first discovery I noticed that the larva before undergoing its metamorphosis made its way diagonally into the wood of the branch, where it excavated an oblong cell flush with the under-side of the bark. The latter was not pierced until the perfect insect made its way through it to gain access to the outer world. Until the end of May, 1896, I was only able to find the larvae under the bark or undergoing their transformations in the cells. In May, 1896, seeing that the branches were very badly attacked, in trying to destroy the larvae I found in one of the cells a perfect insect, which I recognised at once as an *Agrilus*. Afterwards I found some ten of the perfect

insects, but never, either before or afterwards, could I discover the insect on the leaves.

DESCRIPTION OF THE INSECT.

Agrilus sinuatus is a small beetle from four-tenths of an inch to six-tenths of an inch in length, and from one-tenth of an inch to one-eighth of an inch in width. The head, thorax, and wing cases are finely rugose. All the upper surface of the insect is of a brilliant coppery violet colour. The under-side is of a violet-green, tinted with coppery reflections. The segments of the body are finely punctured, whilst the under-sides of the head and thorax are closely wrinkled. The eyes are large and prominent. The head is nearly as wide as the thorax. The larvæ are legless, and measure from six-tenths of an inch to nearly nine-tenths of an inch in length when full grown, and are of a pearly white colour. The head is partly sunk into the first joint of the body, which is nearly round and much larger than the other joints. The latter, which are ten in number, are rather flattened and are slightly winged on their edges. The last joint is terminated by two horn-like appendages curved in the arc of a circle, forming a kind of fork. Persons who are interested in this subject will find a fuller and historical description of this insect in a communication made to the Société National d'Agriculture de France by Dr. Laboulbène on May 19, 1897.

THE LIFE HISTORY.

In the course of June or July when the bark is still smooth the female lays an egg on the branches of Pear trees, which soon hatches. The larva makes its way into the thickness of the bark, generally taking a downward direction, making the gallery more winding as it goes on. One then generally finds that the bark splits above the passage formed by the larva. After having thus followed the bark in its approach to the wood the larva reaches the growing layers; there the larva feeds on the young woody and other tissues, making its gallery deeper, which becomes more and more winding in zigzags. Often the gallery describes a complete turn round the branch. One often finds that the bark on either side of the gallery dries up and dies, with a characteristic appearance that at once reveals the presence of the larva. When towards the month of September in the second year the larva has attained its full growth, and after having made a gallery not less than from 31 inches to 35 inches in length, it penetrates obliquely into the wood, excavating a little oblong cell, opening under the bark. This cell being finished, the larva closes the mouth with a little sawdust, its extremity projecting under the bark for about one-twentieth of an inch; then it is transformed into a chrysalis, and into a perfect insect about the end of May. It then opens out the end of the cell with its mandibles, pierces the bark and flies away, and soon, at its convenience, lays its eggs on the bark. This *Agrilus*, like all the Buprestidæ, is very agile, and flies off as soon as it is the least alarmed. I had made the foregoing observations without being sure if this insect was known. The researches that I made to find out if this insect had been previously noticed were without effect. No treatise on arboriculture mentioned the insect. The principal works on agricultural entomology to which one could turn—Maurice Girard, Brehm, Boisduval—do not allude to the insect. Kaltenbach in his important work on the enemies of the Pear does not mention it. The determination of the species of *Agrilus* is very difficult, and as I could not find in any of the works just mentioned anything relating to an *Agrilus* at-

tacking Pear trees, I thought it would be best to consult Dr. Laboulbène, the president of the Entomological Society of France, who kindly interested himself in this subject. He sent the perfect insects that I had brought him to Dr. Fairmaire to determine the species. Dr. Fairmaire recognised this insect as *Agrilus sinuatus* (Olivier). Just at this time, and even before I knew Dr. Fairmaire's opinion, there appeared in the *Revue Horticole* of March 16, 1897, an article by Prof. Gitton, of Orleans, describing this insect and giving its life-history. An editorial note stated that the insect in question had been noticed and studied by Dr. Puton. I then made Dr. Laboulbène aware of this fresh information. Dr. Laboulbène put himself into communication with Dr. Puton, and on my part I wrote to M. Gitton. The observations of M. Gitton agreed on nearly all points with mine. He had always noticed that galleries were from 63 inches to 71 inches or more in length and very winding, particularly at the end, and he had only observed the insect on the Pear. The observations of Dr. Puton differ considerably from mine. Firstly, Dr. Puton has only found galleries from 10 inches to 12 inches in length and nearly straight. The galleries that I noticed were always much longer and they were always very winding. Secondly, according to Dr. Puton, the insect only attacks trees in the open. I have met with them equally on trees in the open and on trees against walls, and it is on the latter that I have most frequently detected the attack. This may be that these trees are more easily watched, but, unfortunately, these espaliers suffer only too often. Thirdly, Dr. Puton points out that this insect attacks Pears and Apples indifferently. I have never seen an Apple attacked, though this tree with me is often side by side with a Pear, and sometimes the branches even cross one another. M. Gitton has told me that he has never seen this insect on Apple trees. Fourthly, Dr. Puton shows that the Mountain Ash also serves as a habitation for the larvæ of this insect. The investigations that I have been able to make are too limited for me to form an opinion on this subject. It is not, however, surprising that this insect should attack both the Pear and the Mountain Ash, a tree very nearly allied to the former. Mountain Ashes are common in the neighbouring woods, so that if the insect is common on these trees it could easily reach Pear orchards and propagate itself, finding in this tree a desirable home and a better host. There is still the question of the direction and length of the galleries. I have always noticed the arrangement referred to above. The number of observations that I have made on this subject, and which amount to several hundreds, enables me to assert that at least in the places where I have observed the insect it always behaves in the same manner, and forms a winding gallery 20 inches to 35 inches in length.

VARIETY OF TREES ATTACKED.

On my part, as I have already said, I have only noticed this insect on Pear trees, but, contrary to the statement of Dr. Puton, on trees on walls as well as on those in the open, all the varieties that I have grown have been attacked, and I cannot point out one that is more subject to the attacks of this insect than another. I have found this insect in the winter on Doyenné du Comice, and in the summer on Duchesse, William's, Cure, Passe Crassane, Olivier de Serres, Bonne d'Ezée, Beurré Diel, Beurré Hardy, &c. I have observed this insect also at the School of Horticulture of Versailles, at the school at Grignon and at Louveciennes, but without being able to make any very careful

observations. The injuries caused by this insect are often very considerable. On my trees I have counted the branches that have been attacked by hundreds. The branch often dies as the result of the attack by this larva (even though the gallery it forms is so small), or at least it droops for several years. Sometimes the insect even attacks the stem; the whole tree then dies or continues in a weak, unhealthy condition for several years after the insect has left it.

Are there, then, any means of protection against the ravages caused by *Agrilus sinuatus*? Indeed, I have not seen any that are really efficacious. The stems of standard trees one can protect with a coating of tar, or perhaps with a thick layer of lime, or one may wind bands of straw round the stem, as Dr. Puton has suggested. Tar is mischievous; it will prevent the insect from laying its eggs, but it injures the bark, making it unyielding, and so prevents the proper growth of the tree. The straw would be preferable, but it is troublesome, as it will not last for more than two years. Lime would be only a poor remedy, I should think; it would come off very quickly, in certain parts at any rate, which the insect would search for to lay its eggs on. However, liming has other advantages (above all, in being able to add to the lime a certain quantity of sulphate of copper) and it can be used all the year. As to the branches, it is impossible to try and protect them. It is necessary, then, to try and destroy the insect. The perfect insect is very difficult to capture; it is, therefore, against the larva that one must contend. When it is noticed that a branch is attacked, either by the buds not opening or by the death of part of the bark, the injured part of the bark should be removed with a grafting or pruning knife, and the gallery should be followed until the larva is found. If this operation is carried out in time the branch will recover and the bark will grow again; if, on the contrary, the larva continues its course, the branch often droops more or less. The wound caused by searching for the larva is, however, much more extensive than that made by the larva, but in spite of that it heals more rapidly. It seems without doubt that the larva produces a substance that is poisonous to the tree, a kind of toxine, which impedes the healing. One sees, indeed, the bark wither quickly on both sides of the gallery for a considerable width, and even beyond; the wood also dies rapidly to a considerable depth. Even if the branch is very vigorous, and the decay only exists a little on either side of the gallery, the cicatrised swellings of the growing tissues do not seem able to grow over the gallery, which may still be found after many years. A wound of the same size made by a cutting instrument on a healthy branch would be covered in the first year. The branch seems to suffer most as soon as the larva penetrates into the wood. If the branch is not of great importance, or if it has been already badly attacked, it is often best to cut it away altogether below the part attacked, near a bud which will eventually form a new and healthy branch. The parts of the branch that have been attacked should be burnt, so as to kill any larvæ that they may contain. As I was communicating this paper to the society I received a letter from M. Gitton saying that he had sent me some specimens of an *Agrilus*, and he told me that he had found this insect in the branches of the Azarole Thorn. The *Agrilus* sent by M. Gitton were identical with those that I had found on my trees. The question then arises, are they the same species?

M. PIERRE PASSY.

TREES AND SHRUBS.

CYTISUS PRÆCOX.

It is now more than thirty years since this beautiful shrub was first noticed by the late Mr. G. Wheeler, of the Warminster Nurseries. He found it growing in a bed of seedlings of *Cytisus purgans*, and it was, as was afterwards proved, a hybrid between that species and the white Portugal Broom (*C. albus*). From Mr. Wheeler's plant the thousands now scattered over the gardens of this and other countries have, I suppose, all descended. The cross had no doubt been effected by a bee or other insect; indeed, there does not appear to have ever been a hybrid raised artificially between any two members of the hardy shrubby Leguminosæ. I cannot, at any rate, call one to mind. *Cytisus kewensis*, in its way as distinct and beautiful a shrub as the one now figured, appeared also as a chance seedling among a sowing of *C. Ardoini*, one of its parents.]

Cytisus præcox is, as a rule, in flower by the middle of April and continues from that time

neglecting the plants when young; at any rate, it may be deferred by proper attention at that time. The plants simply require to be topped with a knife occasionally from the time they are a few inches high till they are 18 inches or so high. By this means a thick crop of branches near the ground is obtained, as seen in the illustration. I have not seen this shrub more than about 8 feet high, but no doubt it will grow taller. It seems in stature to follow the pollen parent (*C. albus*) closer than *C. purgans*, which makes a sturdy, compact shrub with little or no pruning.

The best way to propagate *Cytisus præcox* is by means of cuttings. These may be taken in August and dibbled firmly into sandy soil in some shady, sheltered corner under a bell-glass or handlight. It ripens seed in any quantity, but only a small proportion comes true. Some of the seedlings revert to the yellow-flowered *C. purgans*; others produce various forms intermediate between that species and the pure white *C. albus*. It is, I believe, sometimes the practice to propagate it by grafting on roots of common Laburnum, but longer-lived, better



Cytisus præcox. From a photograph sent by Mrs. Tatton, Wythenshawe, Northenden.

well into May. There are many beautiful shrubs in bloom then, but it would be difficult to find among them one to surpass this Broom in the beauty and wealth of its blossom. It is essentially a shrub for every garden. In habit it is free and graceful, making each year when in vigorous health shoots 1 foot or 1½ feet long. These are clothed almost from end to end with a profusion of soft sulphur-yellow blooms—so abundant, indeed, are they, that there is little else but flowers to be seen when they are in full bloom. But even out of flower this shrub has its uses and attractions. It produces a thick mass of shoots, which, although almost destitute of foliage even in summer, are themselves of a lively green and give the shrub quite the character and value of an evergreen. The odour of the flowers, whilst not exactly offensive, is too heavy and powerful to be pleasing, especially when the plants are grown in a large group. For this reason it should not be planted close to dwelling-room windows and such like places. Like several others of the taller Brooms, this is liable in time to become bare and leggy at the base. This condition, however, is often in a great measure due to

plants are got with less trouble by means of cuttings.

A word may be here appropriately introduced in favour of *C. purgans*. Considering the beauty of its golden-yellow flowers, which appear as early as those of *C. præcox*, it is curious that it is now so neglected. It has not the vigour of its hybrid progeny, and, according to my experience, is healthier and better when raised from seed than when propagated by any other means, even by cuttings. It is grown in some nurseries under the erroneous name of *Genista anxantica*. W. J. BEAN.

Philadelphus grandiflorus.—Under this name I have a small tree of the so-called Mock Orange that eclipses every sort I have seen in the size of the individual flowers. In a small state it is very striking. This would seem to be a mid-season variety, as many are over, but there remain a few still to come into bloom. For cutting the Mock Oranges are by most people avoided because of their sickly and powerful scent. A spray or two arranged in small vases would be admissible in cases where highly-scented flowers are not objected to, the pure white of the blooms and enormous size making up a most dis-

tinct and desirable flower. Nature seems to have endowed *P. grandiflorus* with a habit to suit the flower, for I notice the blooms are thinly disposed instead of clustered on the branching growths.—W. S.

TREES AND SHRUBS IN BLOOM IN DEVON.

ABUTILON VENILLARIUM is again in full flower, its long curving shoots studded with crimson, gold-centred pendent blossoms. This is one of the most persistent bloomers that we have, carrying its flowers into November and December in mild winters, and often commencing to bloom again after an interval of about four months. Both the white and mauve varieties of *Abutilon vitifolium* have been flowering well in sheltered situations, but in exposed positions they suffered considerably from the late March frosts and have blossomed but sparingly. Large pyramid specimens of this *Abutilon* 8 feet or 9 feet high covered with blossom are particularly ornamental when seen standing in an open space amid surrounding foliage. This is also the case with the Strawberry Tree (*Benthamia fragifera*), whose pale yellow blossoms are thrown up to the best advantage by a background of verdant leafage. *Carpenteria californica* has been blooming in not a few gardens, and at the close of the month I saw a fine specimen some 6 feet in height and 8 feet through liberally set with its white scented flowers. Many of the *Ceanothus* family have also been in flower, their blue tints being especially effective when contrasted with the white blossoms of the Mexican Orange Flower (*Choisya ternata*). In the early days of the month the Ghent Azaleas formed a brilliant display with their suavely harmonising hues of fiery scarlet, orange, saffron, sulphur, and cream, while towards its close the *Cistuses* bore their fragile blossoms, the yellow, maroon-blotched *C. formosus*, the white *C. florentinus*, and the large white *C. ladaniferus maculatus*, with clarot-coloured spots at the base of each petal, being especially noticeable. The pure white *C. ladaniferus* is apparently uncommon in the south-west. In Spain it grows in quantity upon the steep hillsides, the large white flowers being about 5 inches in diameter. Many varieties of *Crategus* have been in flower throughout the month, some being in full blossom up to the concluding days. *Cytisus Andreanus* swathed its shoots in gold and chestnut; and the yellow Broom brightened the shrubberies with its gleaming yellow. The former appears to come true from seed, as I saw a bush which had been raised from seed and which bore flowers the exact counterpart of those of its parent. *Deutzias*, double and single, have been white with flower, and many specimens of *Dracaena australis* have perfected their odorous flower-spikes, one plant about 8 feet in height bearing two large spires of bloom, each nearly 3 feet in length. The Fire Bush (*Embothrium coccineum*) bore its vermilion flower-clusters well into the month of June, and *Escallonia macrantha* and *E. Philippii* have been in bloom. The *Habrothamnus* and *Hedysarum coronarium* are also flowering, as is the yellow *Jasminum revolutum*, which in some gardens is grown in bush form. The Mountain Laurel (*Kalmia latifolia*) carries its clusters of cupped blossoms, white, with the faintest tinge of pink, and the old Portugal Laurels have been smothered in the profusion of their ivory-white bloom-spikes, whose heavy odour is somewhat oppressive on breathless days. The Tulip Trees (*Liriodendron tulipifera*) have borne their daintily-tinted blossoms of fawn, yellow and green, but no white chalice has as yet expanded on the great standard *Magnolia grandiflora*. Last year the first blossom opened on May 10, and the two preceding years on June 21 and June 15 respectively, though in 1895, after the severe frost, the early buds were all killed back, and it was September 21 before the first flower opened its petals. *Ozothamnus rosmarinifolius* has bloomed most lavishly, every branchlet being hidden beneath a layer of minute tightly-packed flowers that are exceedingly fragrant. The blossoms last a long while on the

shrub, and sprays if cut and dried retain the flowers throughout the winter. Of the Daisy bushes, *Olearia stellulata* and *O. Gunni* are thickly set with their white star flowers, while the *Syringas* have commenced their odorous blossoming, and on moonlit nights stand wraith-like in their shimmering apparel by the side of winding garden ways. *Philadelphus speciosus*, which bears a flower of snowy whiteness over 2 inches in diameter, is the most effective of all the *Syringas*, but the charming *P. mexicanus* with its small, cupped blossoms is a particularly choice shrub. *P. grandiflorus*, *P. hirsutus*, *P. Gordonianus*, and *P. microphyllus* have been in bloom amongst other varieties. The New Zealand *Flaxes* (*Phormium*), both the type and the variegated form, have sent up their towering dark red flower-stems, and great bushes of the Jerusalem Sage (*Phlomis frutescens*) are bearing their yellow flowers on the cliff-edges. Many specimens of the hardy Palms, *Chamærops Fortunei* and *C. humilis*, are producing their large bloom-clusters, now bright yellow in colour. In the opening week of June *Paulownia imperialis* still retained its lilac-blue flower-spikes, and the Fuchsia-flowered Currant (*Ribes speciosum*) and the Golden Currant (*R. aureum*) were bright with their blooms of vivid crimson and yellow, while many *Rhododendrons* made gorgeous pictures. The False Acacias (*Robinia*) bore their drooping bloom-tassels of white or pink, and appeared to the best advantage when backed by Copper Beeches. *Rubus palmatus*, the so-called Strawberry-Raspberry, can scarcely be termed a shrub since it is practically herbaceous, but, though dwarf, it is distinctly decorative, its deeply pinnate leafage and large white, Blackberry-like flowers rendering it decidedly ornamental. Great bushes of *Solanum crispum* bore clusters of mauve, yellow-centred blooms. *Styrax japonica* has flowered, and many of the shrubby *Spiræas* perfected their inflorescence, amongst the most noteworthy being *S. flagelliformis*, *S. bella*, and *S. Bumalda*. Guelder Roses were white with nodding flower-heads, the Japanese Guelder Rose (*Viburnum plicatum*) being of remarkable beauty and purity, and the hush Honeysuckles (*Weigela*) in their many varieties have also added much to the interest of the garden, the pure white form and the dark maroon *Eva Rathke* being particularly noteworthy.

S. W. F.

Torquay.

THE TWO ELMS.

THERE are more than two species of Elm, but the two species generally recognised as timber trees in this country are *Ulmus campestris*, or common English Elm, and *Ulmus montana*, Wych or Scotch Elm, and some confusion appears to exist about these. Professor Marshall Ward says that *U. montana* "is difficult to distinguish" from *U. campestris*; whereas it is certain that the two varieties generally grown as timber trees and distributed by nurserymen are so thoroughly distinct in habit, foliage and general appearance, that they can be distinguished at a glance near or at a distance. *Ulmus montana* is described by the writer on trees in the "Encyclopædia Britannica"—where one expects correctness of description—as a tree usually attaining a height of 50 feet, but reaching 120 feet when drawn up among tall trees, a fact that speaks volumes for density, but both statements are off the mark, as the tree when full grown considerably exceeds 50 feet anywhere, and does not often attain 120 feet under the most favourable circumstances. The description of the general habit of *U. campestris* in the Encyclopædia applies to *U. montana* more than to *U. campestris*. Brown asserts that *U. montana* is not much cultivated in England, *U. campestris* being preferred; whereas it is grown far more extensively in woods and parks in England than the other, its timber being preferred, being tougher and more useful for many purposes than that of the English Elm. In these respects the qualities of the two trees are very marked. The timber of the English Elm is hard and close grained, and is useful where these qualities are

needed, but at all ages it is brittle compared to the Scotch Elm. If even the one or two-year-old twigs of the two are bent by the fingers, this difference of texture will be seen. From growth to old age the English Elm has a stiff and rather stumpy appearance, and it sheds its leaves a fortnight later than the other. In some old avenues that I am acquainted with the two varieties are mixed, and the difference between the two is seen. The Scotch Elm grows as tall as the English Elm, but has longer, wide-spreading limbs, cleaner furrowed bark, and a partly weeping habit at the extremities of its branches, qualities which render it one of the finest of park trees. Some of the tallest and finest examples to be seen grow in the New Forest in the parks near Beaulieu. The Dutch or Sand Elm is a large growing tree, said to be like the Scotch Elm, but the Elm one sees growing commonly in Dutch pastures is the English Elm, *U. campestris*. In Yorkshire the English Elm is called the Dutch Elm by timber merchants, and the Scotch Elm is regarded as the English Elm. Buyers are very particular in distinguishing between the two, as the one cannot be substituted for the other for many purposes, and the Scotch Elm is generally preferred. In plantation culture this variety produces a tall, clean stem, which in fifty or sixty years reaches a useful size, fetching about 1s. per cubic foot; very large butts fetch more.

The Elm grows in a great variety of soils, poor and rich, its rapid growth depending more upon shelter than upon the quality of the soil; hence the tallest and cleanest trees are usually found in the densest part of the wood. Near here the Elm and a variety of forest trees are thriving on the "pit hills," which were planted about forty years ago, these hills, as they are called, being the huge mounds of blue shale from the coal pits, and got out in working the coal. Cattle are very fond of the young shoots and leaves of the Elm, and park trees are regularly cropped by cattle and horses as high up as they can reach. I noticed in some parts of the forest regions of Germany, where the cows are fed in the house more than in the field, that the women field hands who passed my window in the evenings often carried back-loads of leaves and twigs of the Elm and other trees for their cows to eat, and which, I was told, formed a considerable part of their food. In German forestry works, trees the foliage of which provide good fodder for cattle are noted; hence probably the reason why the value of trees in that respect is better understood on the Continent than in this country. The Elm not being one of the most extensively grown timber trees, diseases that attack it do not attract notice so much, yet it is one of the trees that suffers severely from the attacks of two beetles—*Scolytus destructor* and *Hylesinus vittatus*—one of which attacks the top branches of the tree and works downwards. In setting out a fall of timber in a mixed wood last year, hardly an Elm was free from signs of this pest, while numbers were dead, or so far gone that they had to come down. The district was, however, smoky and unsuitable for trees, which perhaps promoted the ravages of the pest.

—J. S., in *Field*.

Robinia neo-mexicana.—The Robinias (or Acacias, as they are commonly called) are flowering better this year than they have done for some time, this being due no doubt to the prolonged hot, dry weather of the autumn of last year. This New Mexican species, which is a plant of comparatively recent introduction, is certainly flowering better than it has done hitherto in this country. A small tree about 15 feet high in the collection of Leguminosæ at Kew is bearing a large number of racemes, and is distinct enough to be recognised among all the other Robinias at a considerable distance. The flowers are of a pretty rose colour, deeper in shade than those of any form of the common species (*R. Pseudacacia*); indeed, of almost as fine a rose colour as that of the flowers of *R. hispida* (the Rose Acacia). They appear in pendent racemes about 6 inches long. The single flower is larger than in *R. Pseudacacia*,

the standard petal being nearly 1 inch across. The whole raceme is very like a small one of *R. hispida*, but this is a shrub only, whilst *R. neo-mexicana* is a tree. The species is a decided acquisition, and although it comes from such States as Colorado and Arizona, besides New Mexico (from which it takes its name), it is perfectly hardy. It is the only species of *Robinia* found on the western side of North America. First discovered by Dr. Thurber in 1851, it did not reach cultivation on the eastern side of the United States till 1882, and five years later was sent to Kew.—W. J. B.

NOTES & QUESTIONS.—TREES & SHRUBS.

Syringa Emodi.—It is a pity this Lilac is not more frequently seen. It has many good points to recommend it, not the least being its large heads of white flowers standing erect and its late flowering. It is blooming grandly, and making a fine show now (at the end of June) with me. When this and the late-blooming *Laburnum* are placed somewhat close together they harmonise and give a piece of fine colour.

—J. CROOK.

Genista cinerea.—This is a decidedly attractive member of the Broom family that produces its rich yellow blossoms about the end of June. It is of upright growth, reaches a height of 4 feet to 5 feet, and does not flower till many of the Brooms are over. This *Genista* is a native of South-western Europe, but is not much known in this country. Like most of its immediate allies, it is less affected by drought than many other shrubs.—T.

Spiræa bracteata.—This Japanese species of *Spiræa* merits a place among the more desirable of the shrubby kinds, as it is free in growth, flowers profusely, and as a rule seems to be proof against spring frosts, which, at least in the case of some, play havoc with the future display of bloom. It forms a bold-growing bush 5 feet to 6 feet high, that during the flowering period is thickly studded with rounded clusters of white blossoms. Like the other members of the genus, a fairly moist soil is essential to its well-doing.—T.

Deutzia discolor purpurascens.—I was greatly interested in the note by W. J. Bean (p. 422, June 17) on the above *Deutzia*, and was delighted to find he could bestow such praise upon it as growing at Kew. I had formed a very favourable opinion of it from small plants growing here, for they bloom freely, the colour is charming, and it is apparently a good grower. The specimens are too small to enable me to form a definite opinion upon its merits as an all-round hardy shrub, but I am pleased Mr. Bean is in a position to do so.—J. ROBERTS, *The Gardens, Tun-y-bwelch, N. Wales*.

Escallonia langleyensis.—This pretty and interesting *Escallonia* was recently shown in good condition at the Drill Hall. It is of hybrid origin, the parents being *E. macrantha* with pink blossoms, and *E. Philippiana*, whose tiny white flowers are borne in the greatest profusion. In this hybrid the flowers more nearly resemble those of *E. Philippiana*, but they are of a pleasing shade of pink. It is a decided acquisition to this pretty class of flowering shrubs, and one that will doubtless in time become popular. This is the second *Escallonia* of hybrid origin that we have had within recent years, *E. exoniensis* being the other.—H. P.

Bulbous plants at the Temple show.—In addition to the Lilies, Irises and Tulips, various other bulbous plants were represented. Many of the Mariposa Lilies (*Calochorti*) were shown in bloom, amongst which were *C. Purdyi*, *C. roseus*, *C. Benthani*, *C. pulchellus*, *C. amicus*, *C. citrinus*, and *C. venustus oculatus*, this last being the only one of the larger-flowered section in bloom the date being a full three weeks too early for the handsomest of the *Calochorti* to be at their best. A good collection of spikes of *Ixias* was shown, the most charming of which was the sea green and purple *I. viridiflora*. Of *Sparaxis*, *Fire King* was particularly brilliantly coloured. *Brodieas* and *Tritonias* were also exhibited, and of the early *Gladioli*, the exquisitely tinted *Blushing Bride* and *delicatissima* were very charming, as was *Salmon Queen*, while the brightly coloured insignis was particularly

attractive. It is a pity that these beautiful flowers are not more generally grown in gardens where *Gladiolus* The Bride flourishes and increases year by year, and there are not a few such gardens in the south-west, since there seems to be no reason why, under similar conditions, these other early forms should not succeed equally well. The *Quamash* was represented by *Camassia esculenta*, *C. cusickii* and *C. leichtlinii* alba. These handsome bulbous plants are too rarely seen in gardens. *Ornithogalum arabicum* was shown in fine bloom, and *Fritillaria pyrenaica* and *Trillium stylosum* were also to be seen in flower.—S. W. F.

FLOWER GARDEN.

ASTER STRACHEYI.

THIS, it may be said, is one of the dwarfest of this great genus. It is, however, a good distinct early-flowering species from the Western Himalayas, and by reason of its earliness alone may be of some service to the hybridist if associated with the other early-flowering alpine kinds. The plant usually flowers in May or early June, and is therefore in touch with *A. alpinus* and its varieties, as also the North American *A. pelegrius* that blooms at much the same period. *A. Stracheyi* is a comparatively recent introduction, having been known in cultivation a dozen years or so. The plant, little more than 6 inches or 8 inches high, bears flower-heads of a pale lilac-blue shade, each about 1½ inches across. In habit of growth the species is less vigorous than *A. alpinus* vars., with obovate leaves from the radical portion, those on the creeping stems or stolons, so clearly shown in the accompanying illustration, being much smaller. This pretty species is worthy of good cultivation in the rock garden; indeed, if at all neglected would soon present a poor appearance by reason of its small size. In rich and gritty loam this little species spreads out more quickly than when grown in pots where but a limited supply of soil exists, and smallness of stature should not be taken to mean a small amount of soil to grow in particularly with these high mountain plants. The flower-heads in the illustration are apparently of larger size than I have seen in this species, but which I accept as the outcome of good culture and suitable environment. Indeed, good culture often brings out characters in size and colour in such things that by ordinary methods are too frequently kept in abeyance.

E. J.

Clematises.—Many a garden archway and pergola are now beautified by the large pale stars of the earlier-flowering *Clematises*. Of these, *Lawsoniana*, pale mauve; *Gloire de St. Julien*, white, shaded mauve; *Anderson-Henryi*, white, with dark stamens, and *Excelsior*, deep mauve, are amongst the handsomest, some of them under liberal cultivation producing flowers almost a foot in diameter. The hybrids of *Clematis coccinea*, ranging in colour from pale flesh to deep rose, are also pretty with their bell-shaped contour, *Duchess of York*, *Grace Darling* and *Countess of Onslow* being especially attractive. The alpine *Clematis* (*Atragene alpina*), with its gracefully fashioned blue and white half-opened stars, has a charming effect when seen festooning an old trunk or clambering over rockwork. There is also a totally white form of this latter plant.—S. W. F.

Lilies and Irises at the Temple.—A fair number of Lilies was exhibited in bloom at the Temple show, amongst these being the beautiful *L. Szovitzianum*. *L. Hansonii* and its two hybrids, *L. Dalhousii* and *L. Marhan*, were present, as were the buff *L. excelsum* or *testaceum*, the yellow evil-smelling *L. pyrenaicum*, numerous varieties of *L. umbellatum* and *L. Thunbergianum*

of various shades of orange-red, *L. Martagon* album and *L. longiflorum giganteum*, but of *L. rubellum* only one or two puny plants were shown, specimens in no way comparable to those exhibited in 1898. It is to be hoped that this does not mean that this beautiful Lily does not possess the hardy constitution attributed to it when it was first distributed, but I have known cases where it has failed to appear above the ground this year. Another plant that in 1898 was exhibited at the same stand where the fine specimens of *Lilium rubellum* referred to were shown was conspicuous by its absence; this was *Watsonia iridiflora*, whose tall white flower-spikes were so effective last year. Of Irises there were good collections of the German Flags and the Spanish sections, while *I. Korolkowi*, *I. K. violacea*, *I. K. leichtlinii*, *I. susiana*, *I. lupina*, *I. leichtlinii*, *I. missouriensis*, *I. Tolmiciensis*, *I. virginica* and forms of *I. sibirica* were shown.—S. W. F.

ROCK AND DWARF PLANTS AT THE TEMPLE.

AMONGST the collections of plants for the rock garden the following were noticeable: *Achillea argentea*, *A. mongolica* with its tall scapes of white flowers, *Adonis vernalis* with its yellow blooms and Fennel-like foliage, and *Antennaria dioica rosea* with its bright pink corymbs of flower. *Anthericum liliastrium maximum* bore its white blooms, *Antirrhinum asarinum* and *Anthyllis atrorubens* were flowering, and *Arenaria*



Aster Stracheyi.

montana and *A. grandiflora*, as well as *A. verna*, were to be seen bearing their white flowers, and the rare little *Asperula hirta* was present, as was *Aster alpinus*. *Delphinium nudicaule* was conspicuous with its scarlet blooms, and *Dianthus alpinus* and *Dielytra formosa* were among the collections. The American Cowslips were represented by *Dodecatheon elegans*, *D. Jeffreyanum*, *D. Meadia*, and *D. M. album*, *Edraianthus serpyllifolius* and the white-flowered *Epimedium niveum*, the orange-bloomed *Erigeron aurantiacus*, the purple *E. Roylei* and *E. salsuginosus* were on view, while of the *Gentians*, *G. verna* and *G. acaulis* displayed their deep blue, and *Geum Heldreichii* and *G. montanum* were effectively shown. The Himalayan *Gypsophila cerastoides* was bearing its white flower-heads, and *Haberlea rhodopensis* its pale lilac blooms. The white-flowered *Helianthemum umbellatum* was in evidence, and *Heuchera sanguinea* bore its coral-red bloom-spires, while *Hippocrepis comosa* revealed its yellow Vetch-like flowers, and the little *Hutchinsia alpina* was also in bloom. Candytufts were represented by *Iberis gibraltarica*, *I. linifolia*, *I. Little Gem*, *I. sempervirens*, and *I. superba*. *Ionopsidium acaule* showed its countless minute flowers of palest mauve, *Linaria hepaticifolia* and *L. origanifolia* were in blossom, and of the *Flaxes*, *Linum alpinum* was bearing its blue flowers and *L. arborescens* its bright yellow blooms. *Leiophyllum buxifolium prostratum* was shown, as were *Lychnis alpina* and *L. dioica*

rubra plena, *Menziesia polifolia alba*, and the yellow-flowered *Morisia hypogaea*. *Onosma tauricum* was bearing the drooping bells that earned its name of Golden Drop, and *Ononis rotundifolia* its rose-coloured blooms, while the somewhat intractable *Ourisia coccinea* displayed its vermilion flower-spikes. The delicate little *Papaver alpinum* was exhibited. *Potentilla rupestris* and the yellow *P. verna* were also present, as well as many of the dwarf *Phloxes*, of which *Vivid* was the most striking, while *Primula luteola* was also shown. *Ramondia pyrenaica* carried its mauve-blue flowers, *Ranunculus monspeliensis* showed its blooms of polished gold, and *R. planifolius* was also represented. A large pan of *Saponaria ocyroides* alba covered with white blossoms was a pleasing object. Many *Saxifrages* were shown, *Smilacina (Maianthemum) bifolia* was bearing its delicate little white flower-spikes, and *Triantalis europaea* its white *Omphalodes*-like blossoms, while *Veronica gentianoides taurica* and *Viola pedata* were to be seen in flower.

S. W. F.

NOTES ON HARDY PLANTS.

Veronica Fairfieldi.—This is one of the very dwarf evergreen species from New Zealand, most, if not exclusively, fitted for the rock garden or the company of alpine; hence its classification with plants as above. There are two specially commendable features about this plant, and they have induced me to make this note. They are (1) early flowers, and (2) plenty of them. Of course, these features are spoken of only in relation to other of the new kinds of the dwarf *Veronicas*, many of which give a paucity of flowers and some practically none at all, and generally those that do flower are rather late. The present kind has been in bloom with me in Yorkshire since the middle of May, and the flowers are in spikelets from all the axils of the upper leaves, which are small, thick, and glossy. The effect of the little bushes, only 6 inches or 8 inches high, is both pretty and uncommon, and they at once suggest themselves as suitable material for rocky fissures in sunny aspects.

Silene pusilla is the name of a plant I wish everybody could see at its best about June, though it begins in April and lasts with a fair show until September. I believe it is a variety or near relative of *quadrifida*, from which, by those who know that excellent creeper, its habit and masses of starry pure white flowers will in some measure be realised. It is a gem amongst alpine, its herbage scarcely more than Moss-like, and the dainty flowers only 2 inches to 4 inches high. Moreover, it is a reliable plant. You hardly ever see a gap when it has once been planted carefully. It not only runs slightly, but in spring it breaks back to the centre of the plant again. It also comes from self-sown seed, and it is, I think, by such development more than anything else that you may be sure you have it under the right cultural conditions, and that you will not be likely to lose it. I mention this because I know some expert growers of alpine plants have lost it more than once. Give it a moist, flat position on the rockery, a bit of chalk in the soil, and so much fibrous loam or sand that the surface of the soil can never cake with hot sunshine, and with here and there a boulder on the top to check evaporation, and I cannot think this all-summer bloomer will fail you: indeed, conditions like these would suit almost all the other alpine *Caryophyllaceae*, always supposing that capillary attraction had not been cut off by faulty building.

Gaultheria trichophylla.—I think it is some nine years ago that I introduced this to commerce, and still, though so very beautiful, one rarely meets with it except in the collections of the most advanced class. Just now the plant, which is but 2 inches or 3 inches high, is covered with its bell-shaped flowers, big for the size of the plants, and which will so soon be succeeded by the big sky-blue berries, which look like small blue eggs resting on the ground among the minute twigs. In the same conditions as *G. pro-*

cumbens it does fairly well, or with a little more peat it does splendidly. It, however, needs a fairly pure atmosphere, being very hairy in the foliage. I learn this from seeing the plant do so much better in other gardens than my own where they are not reached by smoke, or at least not Leeds smoke. Besides, we may usefully keep in mind that this Himalayan species has an alpine habitat of 1400 feet.

Campanula tridentata is lovely when seen in flower, as it is on this first morning of June. The flowers remind one of those of the *Platycodons*, and the whole plant of a dwarfed and perennial *Campanula Wanneri*. Most of the leaves are radical and have long stems.

Viola pedata.—No one can see this and its varieties without feeling that its beauty is of the most pronounced kind, but it does not flourish in every garden. I heard it asked the other day by a gentleman who has grown most things in his time in the way of hardy flowers, "Has anyone ever succeeded in making *V. pedata* flourish and increase in this country?" Whilst the question fairly indicates the difficulty about the culture, I certainly could answer from experience that the plant could be grown well. It is a bog plant practically; treat it as such, and get good fresh specimens for a start, not such as have the knobby crowns pulled asunder and then remain some time unplanted, but entire plants with long roots unrotten. The same roots just before planting may be cut off to 2 inches long. The best plants are those established in pots, which may be set out in early summer, when they start freely into growth. Be sure they are clear of green-fly.

Gentiana bavarica.—Certainly this is not one of the most difficult of all alpine to grow, nor even the more so of the plants of its own genus. It is all-important, however, to transfer the plants at the right time, which, according to my experience, is late September or early October. You need to get the benefit of the autumnal issue of roots. Of course, it is totally different and much easier if you secure established pot plants; then a soil made up of humus and sand in a moist and sunny place is all that is needed. The plant is smaller than *vena* in all its parts except the flowers, which are larger (much longer in the tube) and darker blue, and without the distinct white eye of the flowers of *G. verna*. It is true that *imbricata* is commonly met with in collected plants; it is but a variety of *bavarica* of L., and often passes under the typical name in commerce. Still, it is a well-marked form in the way that its name indicates. J. Wood.

Woodville, Kirkstall.

Early Gladiolus Ackermanni.—This early-flowering *Gladiolus* merits more than ordinary praise. The colour may be described as a warm orange-salmon. The main attraction is centred in the blotches upon the three lower petals. Each blotch is composed of pure orange on the outside and the inside commencing with rich lilac shading off to pale pink, a lovely combination of tints. These *Gladioli* succeed well in warm borders under greenhouses in a mixture of peat and loam, afterwards mulching them with peat moss litter. By affording frequent waterings in very hot weather a lovely display is assured. The bulbs are best lifted in autumn and replanted in spring, but they will stand an ordinary winter if the beds are well covered with leaf soil.

Carnations failing.—Many of my Carnations this spring have been very unhealthy; the points of the leaves first become yellow, then the whole shoot withers and soon the plant perishes. This has been going on since February. They are grown in a border at the bottom of a hill, which is rather damp in winter, although well drained, as there is a sunk road immediately below the border. I enclose a whole plant and also shoots of others for your inspection, and should be glad if you would inform me of the cause of the unhealthiness, also what I could do to remedy it. We had a cold and wet spring followed in June

by a long drought. Up till now Carnations have done very well in this garden, and the border is changed about every two years.—ANNIE F. DAVIE.

* * * Your Carnations shoot duly to hand. In one of the shoots that you send we found symptoms of wireworm, and we have no doubt this is the cause of your plants failing. The only way to get rid of the enemy is to grow your Carnations in another part of the garden. Into the piece of ground now affected with wireworm it will be well to fork, after the Carnations have been removed, a good dressing of gaslime, letting the ground lie fallow for a year, frequently stirring it with a fork or hoeing deeply. You can in the meantime put thick slices of Carrot on the ends of pointed sticks, burying these 2 inches or 3 inches in the ground and examining them daily. The wireworm will be found feeding on the Carrot slices and can be destroyed. It is not advisable to grow Carnations in the same soil for two years in succession.—ED.

NOTES FROM NEWRY.

SEVERAL uncommon shrubs and plants have flowered here this season, amongst them *Sorbus* (*Pyrus*) *thiansbanicus*, a most distinct dwarf growing tree. Although my largest specimen is only about 8 feet high, it has ten main stems besides many secondary ones, all of which are ascending. The flowers are borne in terminal, corymbose panicles, and, unlike any other Mountain Ash, are bell-like and pendulous, so that they a good deal resemble those of *Andromeda formosa*; it sets its fruits very sparingly. *Onosma tauricum album* has been very beautiful; the habit, foliage, and flowers are exactly those of *O. tauricum*, but the flowers are waxy white. *Eriogonum compressum* is very distinct. The habit of the plant is very compact, leaves in rosette-like tufts, the creamy white flowers being borne in close capitate heads each 2 inches to 2½ inches across on stems a foot high. *Fendlera rupicola* is a near relative of the *Philadelphus*, with slender, erect shoots, small dark green leaves and handsome white star-like flowers very freely produced. Seedling plants of *Iris tenax* are growing very well in rather elevated ground and in a relatively dry situation. The peculiarity of this is that imported plants refuse to thrive in such a situation, and usually dwindle away unless they are planted in a swamp. These are flowering freely at two years old, and there is a good deal of variation amongst them, the reddish tinge being in some cases much deeper than in others. *Rosa rugosa* × *R. polyantha*, a chance seedling obtained here, is of vigorous habit, my big bush being 10 feet or so across and about 8 feet high; the pure white flowers are borne in the freest possible way, and the petals, unlike those of any other Rose known to me, have serrated margins. *Rosa rugosa* × *rubiginosa*, also a Newry seedling, is of vigorous habit with arching branches, the flowers each about 3 inches across, deep rose in colour and produced in the freest possible way, so as to form close racemes half a yard long. It is also one of the handsomest of fruiting Roses, the fruits being slightly pendulous and of a bright red sealing-wax colour. In *Iris ocaurea*, a seedling from *I. aurea*, the falls are broad and much shorter than in either of its assumed parents, butter yellow in colour, with a very narrow margin of creamy-white, the standards short and broad and similar in colour to the falls. The scape is 5 feet high. It is a very handsome plant. *Enkianthus cernuus ruber* is unlike any other member of the genus known to me; the branches are more or less horizontal, the flowers dull red in colour, pendulous and looking much like bunches of Red Currants. *Enkianthus japonicus* has also flowered freely this season; the blooms are of the purest white, solitary and distributed all over the bush apparently without any order whatever. *Delphinium trolliifolium* deserves a word of praise apart from its being the first of the species to flower. The habit is distinctly pyramidal and the colour a very good shade of blue.

Amongst many combinations worked out this season, a corner of *Lastrea dilatata* filled in with *Hedysarum multijugum* is now very pretty; indeed, the pinnate leaves of the latter harmonise perfectly with the Ferns, while the whole topped with the brightly coloured flowers is most satisfying. T. SMITH.

BORDER FLOWERS AT THE TEMPLE.

WINDFLOWERS were represented by *Anemone alpina* and its variety *sulphurea*, *A. palmata alba*, *A. sylvestris*, and *A. s. flore-pleno*, while the Pasque Flower (*A. Pulsatilla*) was displayed, bearing its pretty downy seed-heads. Of *Aquilegia* there was a charming bank of hybrids, with their long-spurred flowers, the very embodiment of grace, as well as the scarlet *A. canadensis*, *A. cœrulea*, and *A. Stuarti*, perhaps the handsomest of all the *Columbines*; but in many gardens, unfortunately, these three latter refuse to become established. The old double white Rocket (*Hesperis matronalis alba plena*) was represented by a sheaf of odorous bloom-spikes. This plant is one of the most valuable for the herbaceous border, as its blooming period is a prolonged one and it yields the palm to no flower in the sweetness of its perfume. Annual division and transplantation into fresh soil are, however, a desideratum if its vigour is to be maintained. The pink-flowered *Lathyrus Sibthorpi*, one of the earliest flowering Peas, was shown, as were spikes of *Libertia grandiflora*. This is a fine subject in porous soil and a warm locality, where it will grow to a height of 4 feet and increase rapidly, being a most decorative subject when white with blossom. Double varieties of the Iceland Poppy (*Papaver nudicaule*) were shown, but these are less graceful than their single sisters. Tufted Pansies were largely shown, some of the shades being especially charming. No lovelier surfacing for beds of Tea Roses can be imagined than these Pansies, their soft colouring setting off the fair blossoms of the Roses to the best advantage. Of the Globe Flowers (*Trollius*), Orange Globe is a splendid variety, being far larger than the type and of particularly deep colour. *Verbascum phœniceum album* is also a pleasing border plant. Some towering bloom-spikes of *Eremurus robustus* *Elwesianus* and *E. himalaicus* were staged, as were a few flower-heads of the New Zealand Forget-me-not (*Myosotidium nobile*). This plant succeeds best if grown almost entirely in sea sand. *Incarvillea Delavayi* was shown in a few instances. This beautiful plant has bloomed well in certain gardens in South Devon this season, notwithstanding the cold of the late spring. Fortin's giant Lily of the Valley was on view, as was a fine form named *Victoria*. Terrestrial Orchids formed an interesting collection and were represented by *Cypripedium spectabile*, *C. parviflorum*, *C. pubescens*, *C. Calceolus*, *C. macranthum*, *C. acaule*, and *C. occidentale*.

A good collection of Bamboos and Japanese Maples was arranged in the open, near which examples of topiary work in the live Yew formed a useful object-lesson of the futility of such in-artistic methods. S. W. F.

Propagating Myosotis.—It is surprising the difference there is in the quality of the growth of Forget-me-nots year by year. In some seasons one has no trouble to get as many as one wants of the right sort for propagating, i.e., nice, fresh, young and vigorous shoots that come away freely when planted out. In this case older material has to be used, in consequence of which the growth is late even when they are propagated early, and mildew sets in quite early in the season. In some cases growers have given up the dividing up of plants and rely on seedlings, as these are less likely to be attacked, but I have never found much trouble when the young plants have rooted and taken a good hold early. When they are taken from the beds to make room for summer bedding and allowed to lie about until this is finished, they are bound to be weakened and sure to take mildew badly. Here I choose as open a position as

possible for the *Myotis*, but where a little shade at some time during the day is secured. The plants are put into a piece of ground that has not been newly dug and well watered home at once. There are plenty of plants this season, but I do not like the look of them so well as last year, when they made a very vigorous summer and autumn growth, and were, if anything, too large at planting time.—H.

Mimulus Burnettii.—Mr. Robert Lindsay has in his new garden at Kaimes Lodge, Edinburgh, gathered together a most interesting collection of plants, among which are many rarities. A *Mimulus* which pleased me much has been named *Burnettii*, in honour of the raiser, I believe. It is a hybrid between *M. cupreus* and *M. luteus*, and has a good deal of the colouring and habit of the former with the hardiness of the latter. A truly hardy *Mimulus* of this nature is a valuable acquisition. At Kaimes Lodge a large pocket in the rockwork was filled with a mass of the deep orange flowers only a few inches above the soil. The garden is at present a good deal exposed, and will be until the sheltering belt of trees and shrubs planted by Mr. Lindsay grows up, but this *Mimulus* promises to be quite hardy there. The use of *M. luteus* as one of the parents may be noted as being valuable to some who may think of working upon these plants.—S. ARNOTT.

SOME OF THE NEWER TUFTED PANSIES.

By those who have closely followed the development of this plant during recent years a great change has been noted. If we are to interpret the ideas expressed by many, we ought to be absolutely satisfied with, say, about half a dozen sorts in about as many colours, these generally being represented by white, yellow, blue, purple, and perhaps two others with fancy markings. It is very easy to appreciate a few good self-coloured sorts, but to confine the selection to a limited number would be to lose the charm of a goodly number of those of an intermediate shade of colour. The beauty of a large number of the newer introductions is their soft and pleasing shades. Unfortunately, in the minds of prejudiced individuals these newer and refined shades of colour cannot be appreciated. The colours often are designated as washy and unworthy of a place in the hardy flower garden. Take the different shades of blue; it would be most unwise to confine the selection to one or two sorts represented by such as True Blue and the richer indigo-blue Archie Grant. The pretty blue-tinted mauve of Blue Gown, a perfect bedding plant; Magnificent, also a paler shade of blue, and Ophelia, a splendid heliotrope-blue, used in conjunction with these older kinds would each set off the beauty of the other. Again, take those of the lavender shade, and among these are some extremely beautiful sorts. The habit in almost every instance is what a Tufted Pansy should be—dwarf and spreading. Florizal may be described as a pretty lilac-lavender, very free on erect stems, and also a continuous flowering sort; and Kitty Bell, a new sort, makes a capital plant for massing with blossoms of pale lavender. The rose-coloured blossoms are worthy of notice, and as these are a limited quantity, additions of this colour should be highly prized. William Niel has been in cultivation for some time, but to this may now be added an excellent sort by name Magie, of a pretty shade of rose. The flowers are large and freely produced, and the constitution is robust. John Quanton, a deep mauve self, is a very effective bedding sort. Of yellows, many exceedingly fine sorts have been added to the list within the last two or three years. Prior to this there was quite a dearth of really first-class yellow varieties, but now, thanks to persistent work on the part of the hybridiser, the most fastidious taste can easily be satisfied. The finest introduction of the present year among the rich yellow sorts is undoubtedly a variety named Melampus. The flowers are of good size on stout foot-stalks, and produced on a plant with a perfect habit. It is a most persistent bloomer, and plants subjected

to constant division soon attain a good size and are literally covered with lovely rayless blossoms. There should be a good future for this variety. Early in the season—say until the middle of July—Pembroke is invaluable, and this is the parent of a promising progeny. Stephen is another rich yellow flower, useful for an early display. In this instance the flowers are neatly rayed. Of the paler shades we have a beautiful primrose in Primrose Dame, and with its neat orange eye this flower is very effective. The blossoms are large, almost circular, and produced on a rather strong-growing plant. Bouncer is a cross between the well known Ardwell Gem and Mary Scott, the flower retaining the sulphur colour of the former. Princess Louise, the bright yellow rayless flower, still retains its value as a good tufted sort, and may be noted as specially useful for late displays. Cream-coloured flowers may be had in Devonshire Cream, a remarkably free-flowering plant, having neat, rayless blossoms of a telling kind, and William Tell, a very large creamy white self with a rich yellow centre. Of white flowers, the prettiest and neatest of this season's introductions is White Beauty. I know of no other plant that has such a pretty creeping-like style of growth. The flowers are produced on fairly long foot-stalks well above the foliage, and the blossoms are of medium size and pure white. The constitution is splendid. Blanche and White Empress, which appear to be synonymous, are the best of the large cream-white flowers, and are very fine at all times. Masterpiece has medium-sized pure white blossoms and rayless. Anne is another rayless pure white. Councillor W. Waters is still a striking crimson-purple, free, robust, and with an excellent habit. D. B. CRANE.

HERBACEOUS PÆONIES.

GREAT strides are being made in this section of Chinese Pæonies, not only in France, where they have longer been popular than with us, but also in England, where they grow and thrive perhaps equally well on deep, rich, and moderately warm soils. Their flowers are so varied in form and colour and so bold and beautiful as seen growing or as cut in the early opening stage for the house, that the wonder is they are not more grown for cut bloom and for market than is already the case. It would be a good thing if our flower show committees would make a special class for these noble and effective summer flowers. Cut with fairly long stalks and arranged either singly or three blooms in a vase, very effective groups would result.

The following are notes on a few very fine blooms of good, and in some cases new, varieties recently sent to me by Messrs. Clibran and Son, of the Oldfield Nurseries, Altrincham, Cheshire, who evidently grow these flowers to perfection and think a good deal of them at this season of the year. Amongst those I specially noted as above the average in beauty, so far as one can judge from cut flowers, were the following: Duke of York, Albert Crousse, Agnes Mary Kelway, Festiva maxima, Queen's Perfection, and Leonie. The present season has been a most favourable one for these flowers, and I never saw them bloom so well or last fresh and fair so long as they have and are now doing. As a rule their buds are apt to suffer from late spring frosts, and the blooms do not open so well during cold, wet seasons, but they are so noble that no efforts should be spared in growing them to perfection.

CRIMSON BLOOMS.

DUKE OF YORK.—Dark crimson, semi-double, central mass of petaloid stamens of a pale orange-yellow colour behind and incurved; very fine distinct flower.

M. GALLAUD.—Crimson-purple, double, very rich and full.

CRIMSON KING.—Rich dark crimson, full-petaloid with median ring of golden stamens.

AUGUSTIN D'HOUE.—Very full double, crimson-purple.

ROSY BLOOMS.

EMILIE LEMOINE.—Full half-double, bright deep rose.

DR. BRETONNEAU.—Duplex or Anemone-like flower, guard petals rich bright rose-cerise, stamens petaloid, soft pale rose; very distinct.

DUGUESCLIN.—Anemone-like flower, guard petals soft rose, stamens petaloid, pale rose, fading to white, with central tuft of pale rose petals; distinct.

BEAUTÉ DE VILLICANTE.—Semi-double, soft salmon-pink or rose, with yellow stamens; delicate and distinct flower.

ALBERT CROUSSE.—Full double, cupped flower, petals soft rose or peach and serrated at the tips; exquisite bloom.

AGNES MARY KELWAY.—Anemone, with central tuft of rosy petals, guard petals lilac-rose with inner whorl of white, petaloid stamens like the florets of a Japanese Chrysanthemum; very distinct and effective flower.

FAUST.—Similar to the last in form, but paler; guard petals very pale flesh, petaloid stamens white, tuft of petals in centre rose; very delicate and effective bloom.

LEONIE.—This is one of the most superb blooms I have seen; full double, the broad and rose-like petals gently undulated and rarely slightly fringed. The colour is exquisitely pure, flesh, shading to soft salmon-rose in the centre of the flower, the guard petals shading off nearly to pure white. This variety has also a very delicious Rose perfume.

WHITE BLOOMS.

FESTIVA MAXIMA.—Very fine full double, pink in bud, fading to white; one of the best of its class and very free bloomer, bearing several flowers at top of each stalk.

SNOWDRIFT.—A beautiful Anemone-like flower, guard petals white, petaloid stamens white, ovaries dark crimson or chocolate; very neat and effective flower.

QUEEN'S PERFECTION.—A splendid semi-double bloom, guard petals white, flushed rose, cupped and fringed, petaloid stamens pale primrose or sulphur, with central tuft of white crumpled petals; fine distinct bloom.

F. W. BURRIDGE.

Canterbury Bells.—These are among the most charming hardy plants just now, and from a good strain of seed some exceedingly beautiful forms may be raised. I have a large number in the centre walk in the kitchen garden, a very fine effect being produced by the immense spikes of variously-coloured blossoms. One is a very beautiful shade of pink with fine graceful bells, while some of the whites are exquisite. I destroy all that show any tendency to doubling or the cup-and-saucer style, for in my opinion these are monstrosities not worth perpetuating.—H.

Seedling Delphiniums.—It is surprising what an amount of pleasure may be got out of the raising of seedling Delphiniums. I bought a dozen named varieties some four years ago and planted these among seedlings of my own raising, and the result has been very pleasing, many beautiful shades of colour appearing among seedlings since raised. I have noticed among the named kinds that the very deep blue kinds are often of weak growth, the paler ones being stronger, but I have one very richly coloured form that is only flowering for the first time, yet produces immense spikes for its size and the habit is very vigorous.—H. R.

Planting Pæonies.—Though doubtless the herbaceous Pæonies dislike being disturbed as much as most things, they would not have the bad name they have if the work of transplanting were carried out carefully and at the proper time. To leave Pæonies until February or March, then lift them and expect them to take a fresh hold and flower freely in May and June, is asking rather too

much; but taken up soon after the flowers are past and before the foliage has entirely died down, they will obtain a good hold and flower well. Nothing is much finer on the herbaceous border than large clumps of these very showy perennials, but it must not be lost sight of that they are strong-feeding plants, and if allowed to remain many years in the same position without thorough manurings in the form of top-dressings annually, they soon impoverish the soil in their locality. Then, of course, division becomes necessary, as such large clumps are seldom transplanted whole. This is simple enough, but more care than is usual should be taken not to break or damage the crowns and roots. Plants carefully divided and replanted here early last autumn have flowered well in the new positions.—H.

Eremurus himalaicus.—During the last twenty years or more several species of this tall and stately family have been introduced, and the two which have been most prominently brought forward have been *E. robustus* and *E. himalaicus*. The former reaches a height of from 8 feet to 10 feet, and the flowers, of a peach colour, are borne in a close spike about 2½ feet or 3 feet long. In a large garden it forms a conspicuous object, but the foliage is liable to be broken by high winds. *E. himalaicus* commends itself, I think, to most growers of hardy herbaceous things. I have had a good spike of it this year, and the flowers are very closely placed together, forming a dense spike; the colour is pure white and the spike about 1½ feet in length. Where a number of plants could be grown together they would form a very conspicuous object in the herbaceous garden in the month of June. It seeds freely, and many have been successful in raising plants from seed.—D.

Polygonum baldschuanicum.—Judging from the illustration which appeared in THE GARDEN of June 24 of the above new introduction and the interesting note accompanying it by "E. J.," it must be a splendid acquisition to our hardy herbaceous climbers and worthy of being extensively planted. I am pleased to inform "E. J." that it is in commerce, for I had a plant of it from M. Lemoine, and look forward to its proving distinct and effective as it gains in age and strength. It is very commendable of the numerous correspondents of THE GARDEN who have opportunities of seeing new and valuable introductions at Kew and elsewhere to bring them conspicuously to the front for the benefit of those who are less fortunate in that respect, but who, nevertheless, are as keen to possess and grow the good things as they are. I beg to tender my hearty thanks to all for their kindness and great assistance rendered in this way.—J. R.

East Lothian Stocks.—These beautiful Stocks are often seen in a very indifferent condition. Amateurs frequently fail in securing a healthy growth and fine bloom-spikes by giving too poor a root-run. Of course, too much manure is not advisable, this encouraging a rank growth. What the plants like is an open, loamy compost and about a fifth part well-decomposed manure dug in several months previous to planting. I have grown them in the same position year after year, but in that case the old soil should be removed and replaced with new to the depth of a foot or 15 inches. Mulching and watering are often neglected, and the plants when showing flower freely are much benefited by frequent applications of diluted liquid manure. Exhausted blooms should be removed, as if allowed to remain they quickly impoverish the plants and the flowering season is thereby shortened.—N.

Iris tingitana.—Observing a note on this Iris by "J. H. P." on page 458, I send a few lines which tend to confirm that note. I have had the plants in my garden for about twenty years, my first bulbs having been collected in Morocco by Mr. C. Maw. It is a most tantalising plant, flourishing and multiplying quickly, with bulbs as large as those of *Iris xiphioides*, but I have never had a flower on it either in a frame or under a south wall. I have seen it blooming in April in

Mr. Ewbank's garden at Ryde, and Professor Michael Foster has told me that it will flower at Shelford potted in a frame. A few years ago I sent a parcel of fine bulbs of it to be grown in the garden of my cousin near Bayonne, which is on a hillside facing due south and is a regular Dutch oven. There it thrives under a sunny wall even more than in my garden, but not more than one bulb in twenty flowers, so I must confess myself quite at a loss to know what its requirements are. It may perhaps like confinement at the root. I know that to be the case with *Iris filifolia*, another of the *Xiphium* section, which grows in the sunny crevices of the rock at Gibraltar, and which I have persuaded to flower with me once or twice by giving it as far as I can its natural conditions. I think perhaps the crevices of a sunny rockery or potting in a small pot and burying the pot under a south wall might



Pea Michaelmas. From a photograph sent by Mr. Wythes, Syon House, Brentford.

be successful in warm situations, but this is only conjecture, as I have never proved it.—C. WOLLEY-DOD, Edge Hall, Malpas.

Sempervivums at Rockville, Edinburgh.—Those who have a few *Sempervivums* and have taken an interest in the plants cannot fail to have observed how uncertain is the nomenclature of the genus. Even if it could be reduced by an expert, or a body of such authorities, into something like order, it would only remain settled for a short time even if generally accepted, which is hardly likely. We must thus, I imagine, just rub along with the names as they are. Yet it is useful to see a large, carefully named collection. Such shows us little differences, perhaps unobservable unless the plants are near each other,

yet noticeable when grown together. At Rockville, Murrayfield, Edinburgh, Mr. Neill-Fraser has a large and most interesting collection of these *Houseleeks*. Apart from the flowers, which give a considerable range of colour or shade, the rosettes of foliage are exceedingly attractive in their own way. There are various shades of green, from pale yellowish green to a deep glaucous green, with brown and purple-coloured leaves. Then there are distinctions arising from the absence or presence of tomentum, such as is so plainly seen in the *Cohweb* *Houseleeks*. Some are hairy, while others, much alike to look at, are on examination found to be quite pubescent. There are, in fact, many little distinctions which add to the interest of a large collection. Apart altogether from small differences in appearance, dear to collectors, these *Houseleeks* are beautiful, and are not enough made use of to decorate our walls, roofs, rock gardens, and borders.—S. ARNOTT.

GARDEN FLORA.

PLATE 1231.

CYMBIDIUM TRACEYANUM.

(WITH A COLOURED PLATE.*)

THIS remarkable *Cymbidium* first flowered in the nursery of Mr. H. A. Tracey, of Twickenham, quite unexpectedly in December, 1890, and when exhibited at a meeting of the Royal Horticultural Society received a first-class certificate. A few days later the plant was put up for sale, when it was purchased on behalf of Baron Schroeder for 75 guineas. The plant remained the only known specimen until the end of 1894, when a second plant was offered for sale, this plant having flowered in Mr. Prewett's nursery at Hammersmith. Since that time it has appeared in several collections throughout the country. The flowers of none of the later introductions, however, can be compared in point of size with those of the original plant in The Dell collection.

The habitat of the plant has always remained mysterious, and no definite particulars, except that the later-flowered plants came from Upper Burma, have as yet been recorded. The original plant was purchased at a sale of *C. Lowianum* by Mr. Tracey. All the other plants purchased at the same time proved to be *C. Lowianum*. The plants, which afterwards flowered in Mr. Prewett's nursery, were purchased from an importation, and were supposed to be *C. giganteum*; several turned out to be *C. Lowianum*, and there were also several *C. Traceyanum*. This would lead one to suppose that there is a possibility of these varieties growing close to each other. The plants that have recently flowered in continental collections were imported for and grown as *C. grandiflorum* (Hookerianum), but on flowering proved their identity with *C. Traceyanum*. The characteristics of the last-named are so intermediate between *C. grandiflorum* and *C. giganteum*, that there would be good grounds for thinking it possible to be a natural hybrid between these species were it known they grew together. The number of plants that now exist indicates pretty clearly that it must be fairly plentiful in its native habitat.

One of the most distinguishing features of *C. Traceyanum* is its peculiar root action; the whole surface of the pot quickly becomes covered with erect rootlets, which project above the soil some 3 inches. Although it is sometimes seen in *C. giganteum*, I have never met with it to anything like the same extent as in

* Drawn for THE GARDEN by H. G. Moon in Messrs. Sander's nursery at St. Albans. Lithographed and printed by J. L. Goffart.



C. Traceyanum. The habit of growth can scarcely be distinguished from that of *C. giganteum*. The flowers are produced on racemes 3 feet to 5 feet in length, each flower from 4 inches to 6 inches across. There is no need to describe the flowers, the colours of the typical form being well shown in the plate to-day. It is a most distinct and desirable variety and worthy of a place in every collection.

Its cultural requirements are easily supplied, as it possesses a robust and vigorous constitution. I find it does well in a light position in the cool intermediate house, where the temperature at night during the winter months is maintained at 55°. *Miltonia vexillaria* is grown in the same house. It requires a liberal amount of water at the roots during the growing season and until the flower-spikes have been removed, when drier conditions are maintained, only sufficient moisture being given to prevent shrivelling of the bulbs and foliage during the resting period. The potting is done when root-action is commencing, the material used consisting of good fibrous peat, a little loam, and Sphagnum Moss, to which is added a liberal sprinkling of finely broken crocks or rough sand. The pots should be filled to one-half their depth with clean broken crocks, and every precaution should be taken to ensure free drainage. It may be increased by division of the bulbs. The back bulbs, especially of fresh imported plants, break freely, and they make good progress with careful treatment. The pots used for the potting up of back bulbs should not be too large, and they should also be carefully drained.

I noted the variety *C. T. grandiflorum* when exhibited at one of the Drill Hall meetings of the Royal Horticultural Society. I could not then discern sufficient distinction to merit such a descriptive name, for there are varieties much superior in colour and larger in flower than the one then exhibited or that represented in the coloured plate under the above name.

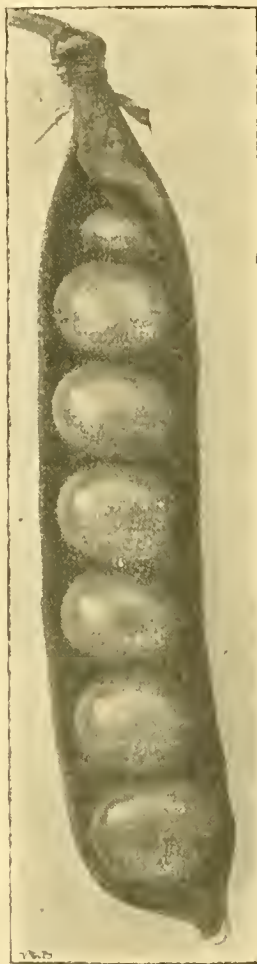
H. J. C.

KITCHEN GARDEN.

LATE PEAS.

IN such seasons as we have just passed through late Peas will be specially welcome. At one time the tall varieties of the British Queen and Ne Plus Ultra type were principally grown for August and September supplies. We now have a much better selection of varieties, and the dwarfier kinds I find more reliable. Most growers will admit it is a difficult matter to beat the well-known Ne Plus Ultra. Some attention has been paid to this variety by raisers in the way of getting a 3-foot variety with equal quality and no loss of pods. Few vegetables have been given so much attention of late years as Peas, with the result that we now have an unlimited selection and some excellent kinds. The varieties illustrated—the Michaelmas and Syon House—are very late kinds. Syon House was raised by crossing Ne Plus Ultra with the well-known Stratagem. We have by so doing a 3½-foot high variety with the free podding and good qualities of both parents. In the Michaelmas Pea we have somewhat similar colour, quality, and crop, but this is even dwarfier than Syon House, being a 2½-foot variety and having a much thicker growth than the older Ne Plus Ultra. This is well named, as in a good holding soil there is no difficulty whatever in having it in quantity at the end of September; indeed, much later if the weather is open. I place much importance on a free grower with ample strength in

the haulm, as such kinds, I find, are better able to resist drought and are less subject to the attacks of mildew than the weaker growers. The nearest approach as regards quality to Ne Plus Ultra is Late Queen. I do not know the parentage of this variety, but it is of vigorous growth and noted for its specially good flavour. This very much resembles Syon House in height, growth and crop and is equally late. Last year I saw this Pea in the north good well into October. Late Queen is more valuable on account of its freedom from mildew, which is so fatal to many of the late Peas. In a measure much depends upon the soil and climatic influences. When I lived in a midland county



Pea Syon House. From a photograph sent by Mr. G. Wythes.

my best all-round summer and early autumn Pea was Veitch's Perfection. Here in a hot, shallow soil resting on gravel it is not at all good. I find those kinds with a sturdy habit and strong haulm are the best. A month ago I covered the soil between the rows of succession Peas with several inches of rotten cow manure, this being done to retain moisture.

For September or August supplies so far I have never failed with Autocrat. I am aware there are later kinds, but few superior as regards quality and cropping. This, like those noted above, stands drought well, and, what is so important to the grower, it gives a successful crop, as whilst one lot of pods is perfecting its growth, others are forming. For some years I grew Sturdy as my latest variety. It has the true Ne Plus Ultra flavour, but

lacks the robust growth of the kinds noted above. In a heavy or cool soil it is very good, but in a lighter one it is less reliable. For very late crops many growers depend upon the first earlies sown in June or the early part of July, but I find it best to grow the kinds that are less subject to mildew. Even then success is not always assured, as germination is faulty unless special culture is given. In some localities a great deal depends upon the time of sowing, a few days too late making a great difference in the growth. Much more room can be given these late crops, not so much between the rows as in the row, as if thick sowings are necessary it will be well to thin afterwards to get a strong plant. The soil must be taken into account, as if at all heavy it is well to give more space to allow the sun to reach the plant at the time the pods are filling. Those who have poor, thin soils have a great difficulty in growing late Peas, and to do so entails much labour and the returns are not always reliable, no matter what variety is grown, as should a wet autumn follow a dry, hot summer, mildew is rampant, more so with some of the tall well-known kinds so often advised for late supplies; indeed, mildew is such a plague to growers, I would strongly advise using a mildew specific or a sulphur solution as soon as the pest is noticed, as this will arrest its course and save the crop.

I find the dwarf growers more reliable and worth special culture, as often if the plants are tided over August there is no further trouble and growth continues till late in the autumn. There are failures. Even this July I have experienced much difficulty in getting the seed to germinate freely. New seed germinates much better than old, and there must be no lack of moisture during growth to get the best results.

—G. WYTHES.

By late crops I do not mean those of the Ne Plus Ultra and British Queen type, which are sown say from the second to the last week in June, according to locality, for a supply through September, but those of the dwarf type which are sown in July for a chance crop during October and until frost cuts them down. This batch requires good management, or fair results cannot be expected. A south or south-west border suits best and the soil should be in good heart, though it is a mistake to dig in very rich manure immediately previous to sowing. If the border was well enriched early in the year and has since been cropped with Lettuce or other non-improverishing subjects, all that will be needed is to turn it up a spit deep, give a sprinkling of some approved fertiliser, tread firmly, and draw out the drills, or where ground is limited, take out the soil the width of the spade and 4 inches or 5 inches deep, sowing the seed thinly and evenly. This will allow of abundance of haulm without overcrowding. As to varieties, I think Chelsea Gem and William Hurst two good ones, 3 feet between the rows being a suitable space. If the ground is in the least dry, the best way is to water well with rosed pots a couple of days before sowing; no more attention will then be needed till growth is sufficiently advanced for staking. At this time a good mulch on each side of the rows must be given, anything in the shape of short manure or old Mushroom manure sufficing to conserve root moisture. If the autumn is dry, fortnightly soakings with liquid manure will be needed, especially on light, well-drained borders. Sparrows also must be watched for, as autumn Peas sometimes fall victims to their ravages. It is always wise to sow two, or even three, varieties where space permits, as if one fails, another may succeed.—NORFOLK.

Potato Famous.—Last year this Potato out-distanced all others grown here in point of earliness, and the same thing has happened again

this season. As it proved to be such an extra early kind, I had a good quantity of tubers saved for planting, and accordingly had a long length of border planted with it the first week in February. Where it will succeed there is no question as to its being a valuable kind for supplying very early tubers, and I am glad I bought it in when I did, as I have not seen it offered for sale since. So long as it continues to give such satisfactory results this Potato will be planted for affording the earliest supply here.—A. W., *Stoke Edith*.

Pea Prodigy.—Having grown this Pea for the first time this season, I am now in a position to speak of its merits as I find it here. The seed was sown on March 20 and the pods are now ready for gathering (July 4). It is a vigorous and rather tall-growing Pea, the haulm being from 5 feet to 6 feet in height, pale or light green in colour and plentifully clothed with long straight pods, which are well filled with from nine to ten Peas in each. In general appearance Prodigy much resembles that fine Pea Boston Unrivalled, only the pods are of a slightly darker colour and perhaps more blunt at the points. A sowing of the latter was made on the same date as Prodigy, but the latter was ready quite five days earlier. It is a remarkably fine green wrinkled Marrow and worthy of extended cultivation where sticks can be had.—A. W.

Pea Dickson's Fertility.—This I have tried this year, with the result that it will be grown again another season. It has not turned out quite so early as I expected, for although sown on March 8, the same time that the first sowing of Boston Unrivalled was made, the latter was ready for gathering quite ten days in advance. In spite of this apparent drawback it is a splendid Pea of the green Marrow type, and is very prolific. The pods, which are deep green in colour, are long and well filled, the Peas of excellent flavour when cooked. The haulm is dwarf and distinct in appearance. The pods, which are produced in pairs and very plentifully, too, contain from nine to ten Peas each. Altogether it is a decided acquisition and well merits the award given by the committee of the Royal Horticultural Society at the Chiswick trials.—A. W.

Early Peas.—In consequence of the wave of very hot weather that set in about the middle of last month, early Peas came in with a rush, and afforded but little or no opportunity for forming an opinion regarding the dates as to when each kind arrived at maturity. Among the five following kinds, Selected Early, First and Best, Harbinger, Earliest Marrow, and May Queen, the last had the advantage by about two days, but whether the result would have been the same had normal weather prevailed it is hard to say. Under the circumstances the present season's results cannot be taken as a fair criterion for the reasons already stated, and I hope next season to again put the matter to the test, and make the trial a more extended one by growing several other reputedly early sorts in addition to those already named. I find May Queen a medium grower, a good cropper, and altogether an excellent kind for first sowing.—S. E. P.

Thrips on Peas.—For some years past the Peas sown in my gardens have been greatly troubled by a small black parasite, the proper name of which I believe is thrips. I have two gardens a quarter of a mile apart, and this pest appears in both. From other gardens close by it is absent. Can you help me in the matter by telling me—1, the best remedy for it when it appears; 2, how to prevent it?—T. NEIGHBOUR.

* * In some gardens the Pea crop seems peculiarly liable to the attacks of thrips as described by Mr. Neighbour, and the attack is generally worse when there are a few weeks of dry weather about the time when the flowers are opening. Some years ago I was for two or three seasons greatly troubled in the same way, and though I cannot claim to have found any sovereign remedy, the experience of those seasons enabled me to baffle the insects to a certain extent and to obtain

good crops. Mr. Neighbour asks for a remedy and a preventive. The first I found in very frequent dustings of soot and wood ashes all over the foliage and flowers. These dustings were applied from the time the first blooms showed until flowering was quite over. The soot was the active portion of the mixture, the wood ashes being added to cool its burning nature, and would not be necessary if soot over two years old could be obtained. The above is both a remedy and a preventive if applied early enough, as the insects which haunt most of all the flowers and the young pods just as they are forming appear to dislike the soot immensely and would not attack any plants so dressed. Other means which appeared to have a strong bearing on the freedom from insects were, first, heavily mulching the rows with rotten manure, so that the haulm was kept growing quickly and did not suffer from drought, and secondly, choosing for the main-crop those varieties which run tall, for the worst attack of thrips was always found on dwarf or semi-dwarf varieties that were short-jointed and large-leaved naturally.—T.

PLANTING BROCCOLI.

Those who have a light, thin soil will find it difficult to get out the Broccoli plants where double cropping is practised, and I fear there are but few who have ample ground at command to get out their crops at the right moment. Last season many growers were in a difficult position owing to the heat, drought and condition of the soil at planting time, and I fear many suffered by the pooriness of the crop in the spring in consequence. When in the midlands I always planted my midseason and late Broccoli in an open field, the soil being very heavy and of good depth. I have never had such fine crops since. There can be no question whatever but that Broccoli does far best in heavy land. I am aware the growth, say from August to October, is not so strong, but that is of little consequence, as a sturdy plant will tide over our variable winters much better than a gross one, and the latter in many cases I have found does not always produce heads in proportion to the plants. By having a short-leaved sturdy plant there is a much better head, and I advise those who can give this plant the position named to do so. Good Broccoli no doubt can be grown on light land, but much better results follow planting on a holding soil. I admit growth in a light soil is more rapid, but this in the case of vegetables for many months on the land is not advantageous, as a soft, rank growth does not mean quality. I have referred to field culture, and am aware that many growers cannot adopt this plan, but it is patent to everyone that if the fine breadths of Broccoli that supply the large markets during April and May depended upon garden culture alone, the supply would be small indeed. I find the quality of these hardy grown Broccoli is often superior to that of those in rich or light garden soils, the curd being closer, whiter, and much firmer. There is no need to dig previous to planting. I got the worst results from land that has been recently turned up, as the plants fail to make that sturdy growth that enables them to stand the winter. It is an excellent plan where land is available to reserve several quarters for this crop, as it will be found that those on the most exposed portion will often give a crop whilst others fail. My only Broccoli saved out of a great number during the severe frost a few winters ago was some plants on a north border. Plants in a more favourable position were killed. I advise plenty of manure for the previous crop, and if the latter is not long on the land it will be in condition for the Broccoli. In my case the late Broccoli follows the early Strawberries. Drills are drawn and the Broccoli plants got in as early in July as possible. The ground being very hard, drills are useful to hold moisture. The seedlings suffer badly in a crowded seed-bed, and it is far better even at this late period to prick out into rows till the quarters are at liberty. This will prevent the seedlings drawing and give a much

better plant, as if lifted with a fork there is plenty of roots. A dwarf, sturdy plant is a great gain, especially in a light soil. Plants treated thus will not need the healing over in winter to protect the stems, as they will be much dwarfer, stronger, and less susceptible to injury, and well moulding up the stems will be sufficient.

G. WYTHES.

Lettuce Continuity.—In spite of the bad character given to this Lettuce by "J. R." it is still a favourite with me, and I have not yet found any one of the Cabbage section more useful. The season of 1898 was in the south a disastrous one for Lettuce, and yet I was never without a good supply; and when I say that I relied almost entirely on Continuity, I think it will be agreed that this is sufficient reason for saying a good word for it. By commencing early and planting in succession I was never short of Lettuce in spite of the drought; not a single plant ran to seed and only a few rotted, and this I attribute to being left too long before cutting. Instead of being soft and spongy, I found them hard and crisp, with excellent hearts; whereas most of the Cos section were a failure and other Cabbage varieties bolted wholesale.—H. H.

Peas on early borders.—The note by "H." (p. 387) on the above subject is to the point. I know the difficulty of having to grow the earliest batches of Peas on the same borders year after year, and that, too, in a warm, shallow soil. Often the haulm will look well enough until the bloom appears and a spell of hot weather sets in. This soon tells a tale unless good mulchings and waterings are resorted to. I have found, however, that occasionally—say every three years—the border is better for replenishing by the addition of fresh compost. Any spare loamy soil of a mixed character, also burnt garden refuse, answers the purpose. The best way to mix it evenly is to take out an opening at one end of the border and throw the soil forward, working in the new material as the work proceeds. Mulchings and manurial waterings may then be given as well. I have sometimes taken out trenches a spit deep on early Pea borders, filling them with fresh material. In this the dwarf Peas did well.—B. S. N.

The Cauliflower grub.—How often is this vegetable infested by a small white grub which clusters round the base of the stems and roots. I have had batches, especially at midsummer, which until three parts grown and about to form hearts looked all that could be desired, then suddenly a collapse came, and they had to be thrown to the rubbish heap. I have thought that in addition to incorporating the usual complement of such ingredients as soot, gas-lime and burnt refuse when the ground is turned up, a mixture of the first and last placed round the ball of roots at planting time would be beneficial, as grubs and insect pests generally are opposed to them. Some people, especially amateurs, are apt to plant such infested plots with some other crop immediately the Cauliflowers are cleared off. Better by far well dress it and let it remain vacant for say six weeks, although this is a difficult matter where space is limited.—C.

Early Cauliflowers.—Mr. Wythes (p. 402) beat me by a few days with the early Cauliflower, as my first heads were not cut until June, but there was practically no break this season between these and the Broccoli, late varieties of the latter being very plentiful and holding out well. The variety of Cauliflower is Early Snowball, and was sown in boxes the first week in February, sufficient for a good batch being potted as soon as the seedlings could be handled. I experienced considerable difficulty for several seasons in getting good early Cauliflowers, as before potting them up the plants invariably clubbed, and that despite trying them in different parts of the garden and measures such as puddling the holes with a thick mixture of soot, lime, and soil, partially filling in with coal ashes and other things. Planted out from pots, however, they come away

without a check and never club. Early Snowball is a splendid little Cauliflower, the small, dense heads being of a snowy whiteness.—E. BURRELL.

Tomatoes not setting.—I have often thought the corrugated varieties of Tomatoes set their fruit more freely than the smooth ones. This may be more imaginary than real, but I am not alone in the opinion. More reliable wet or dull weather varieties appear to be needed. A Scotch grower recently told me that that was the greatest need, as variety was now endless, and the flavour and appearance of many as good as could be expected. I have previously expressed the opinion that were it not for its rugged shape, there would not be a more profitable Tomato than the old Dwarf Orangefield. I well remember the enormous crops produced year after year on a south Peach wall in an Essex garden, when our summers were longer and more even. Its flavour also is grand, though the fruit contained many seeds. I do not think with some that the fewer seeds the better the quality of the fruit. I presume, however, that it would now be difficult to obtain Orangefield true to name.—C.

THE WEEK'S WORK.

KITCHEN GARDEN.

GHERKINS.—These are still grown in some gardens, and prove very useful in autumn. Some appreciate them for mixing with other vegetables for pickling. Provided the plants have been favoured with a sheltered position, growth will now be vigorous. Do not on any account allow many fruits to remain on the plants for the present, as there is yet a good long season for fruiting in front of them before the foliage is cut down by frost. Before any more growth is made mulch the plants liberally for some distance round the main stems with short manure and give a good soaking of farmyard liquid once in three weeks. See that all weak and deformed laterals in the inside of the plants are removed as soon as visible. I have known red spider trouble some when the situation is very hot and dry, and this pest if not destroyed at once soon cripples the plants. In order to check it, apply the hose or garden engine, plying it forcibly on the under side of the leaves.

SPRING PARSLEY.—There is frequently a scarcity of this during the early spring months and until the spring-sown plants are fit for picking. There is usually such a demand for it for garnishing during the winter months, that all full-grown plants, even if favoured with frame or pit protection, get sorely crippled, new growth coming away but slowly in spring. In order, therefore, to meet this emergency, I have always sowed seed on well-worked pieces of ground in good heart about July 20 or 25. The beginning of August would be soon enough for the warmest of counties. If this is well treated as regards moisture and duly thinned out, it will make capital strong stuff for standing the winter if a frame, or frames, are placed over it. If the autumn is fine, the forwardest fronds will sometimes grow sufficiently to allow of their being picked for use during winter, but all except the very strongest of them should be left. In February the plants will rush into new growth and furnish a plentiful supply of fine Parsley when it is often at a premium. I like to prepare the plot for this sowing tolerably early in the season, and if there is any wireworm in the soil, a fair quantity of gas-lime and burnt earth should be worked in, further precaution being taken at sowing time by strewing some wood ashes in the drills. Thin out the young plants freely as soon as fit for handling, that is to say, if they are healthy and strong, this being very important at this season.

LATE VEGETABLE MARROWS.—Seed of this much-esteemed vegetable sown now will produce plants which, grown on with care, will yield fruit at a time when the bulk of the Pea and Bean crops is exhausted. Place the seed pots in a close, warm frame or greenhouse, and after germination bring

the plants on as hardy as possible. This will induce a hardy constitution and one that will stand a few moderate frosts, should they occur extra early in autumn. As soon as the roots are well round the sides of 4½-inch pots, remove them to their final quarters, letting these be as sheltered as possible, and where rough protection can be given as soon as the cooler nights of October set in. A good reliable variety for this sowing is Pen-y-hyd, this being a short-jointed moderate grower, and more easily covered with stakes and mats or strong canvas than the more rampant growers. Leave a small basin round each plant, so that the balls may be kept well moistened, until the plants become thoroughly established and are better able to take care of themselves. Mulching will be advisable even with these late planted lots, as, provided there is ample drainage, Marrows can hardly be kept too moist.

ENDIVE, MAIN-CROP.—I have usually sown my main crop of Endive from July 15 to 20, choosing a rather cool, moist border formerly occupied by Peas or Potatoes. Sow broadcast in preference to drills, using only a moderate quantity of seed, and netting the beds over at once, as chaffinches are very partial to Endive. Fraser's Improved Broad-leaved I find as good as any for winter and spring supplies, not being so liable to bolt as some sorts. Sow also the Moss Curled for earliest use, this being very liable to decay when the fogs of November and December set in. I like to make a second sowing of the Broad-leaved at the end of the month. One of the principal points to be observed with this salad is early and liberal thinning out of the seedlings, finally transplanting into good rich soil, and keeping the roots in a moist condition should the weather prove dry. I have generally left a portion of the young plants at equal distances on the seed-bed. These receiving no check will grow away rapidly and be fit for use early in November, being blanched by placing either pots or slates over them. Endive always pays for extra good culture, as if grown on poor, hungry soil it is tough and bitter, spoiling the salad bowl.

OLD SEAKALE BEDS.—Where these have been forced from year to year with pots and leaves the plants will, on account of early growth, now be covered with flower-stems. These should all be cut off, and if more side growths have sprung from the old stools since the thinning out advised some time ago, all these must also be cut away. Now is the time to apply stimulants either in the form of liquid manure of fair strength or artificial manure sown broadcast and watered in.

J. C.

FRUITS UNDER GLASS.

MELONS.—Seeds for the latest batch of Melons should now be sown, for the fruits of any raised later than this cannot be expected to attain good flavour. Where space is limited and close planting and training on the cordon system are adopted, it is far better to depend on old and tried favourites than to waste much space on new varieties, no matter how well recommended. A case in point has occurred with me this year, as among others I tried in one house four plants each of two new Melons that gained certificates last year, and which have been sent out with the usual character of being free setters and good doers. In one case I have a grand set on the laterals, each fruit at present being about the size of a cricket ball; in the other case no fruits have shown on the laterals, and not sufficient for a crop on the first set of sub-laterals, so that if ever I do manage to get a crop on the plants it will not be until that part of the house is a perfect thicket of leaves, entirely out of keeping with the system under which they were intended to be grown. It is impossible that this failure to show fruits can have arisen from any defect in management, as the two varieties in question are, and have been from the time of sowing, growing side by side, and two other varieties growing in the same house are all one could wish. There is plenty of good free-setting Melons that one could name, so that it is needless

to swell the quick-growing list of certificated varieties by adding to it those which need to be grown on the extension system and which must require at least a month longer to bring the fruits up. In the house which is to be devoted to the late Melons there should be an easily regulated supply of bottom-heat, preferably from hot-water pipes running underneath the beds. Keep a sharp look-out among the earlier batches for spider and for canker, as neither of these must be allowed to spread. Where the fruits are too far advanced to admit of syringing freely and spider appears to be gaining ground, the leaves should be sponged; this requires great care to prevent damage to the leaf, and should only be necessary in extreme cases of neglect, for the syringe well used will generally do all that is needful up to the time of netting, and if the fruits enter on this stage fairly clean, the spider which develops later will not matter much. With canker there should be no delay in applying the usual remedies of air-slaked lime and flowers of sulphur; watering near the stems should be avoided and all possible means taken to keep the affected parts dry. If the lime or anything else which is applied becomes damp, it should be scraped away and replaced by some fresh. When Melons require water, take care to give the soil (except for that portion next the stems) a good soaking and wait until fairly dry again before giving more; this suits them better than adopting the little-and-often method. Of course it will not do to give a heavy soaking just as the fruits are ripening; indeed, they are best then without any, but if the plants are looked after with judgment the soil will at that time be in just that moist condition that will carry the plants through safely. Continue to pinch off the sub-laterals from plants that have set a sufficient crop, as these are neither necessary nor convenient to have on the plants; the fruits come up better without them, as they then get more light and the main leaves if well preserved are all that is necessary.

ORCHARD HOUSE.—In the orchard house the pots will now be full of roots, and these require ample supplies of liquid manure water to enable them to bear the great strain put upon them. As the fruits on the various occupants get towards ripening, overhead syringing, which up to this time has been such an important factor in supporting the trees, must be withheld to prevent the fruits, such as those of the Green Gage and other Plums, from splitting, and Apricots from being blemished. Pears and Apples, if these are grown inside, may be syringed freely for some time to come. These and other trees should have their growth stopped close, except in the case of leading shoots, the latter being simply shortened back to six or eight leaves. It depends on the style of structure whether any shading should be used, but in case of doubt it is always safe to apply a very light shade, movable preferably, but a thin brush over of summer cloud or whitening, the latter mixed thinly with milk, does no harm and prevents the trees from becoming too much distressed on hot, windy days which now and then occur. Damping down, too, in the heat of the day is refreshing. Ventilation must be ample both night and day, and this necessitates netting over the ventilators of houses containing fruit sufficiently forward to attract birds and vermin. Rats frequently do damage to stone and other fruits and should be rigorously kept down in the neighbourhood of houses.

FIGS.—The second crop on early trees should be swelling freely and needs all the aid it can get from sunshine and from feeding at the roots. Heavy waterings may be given now with impunity, and the house should be shut up early enough in the afternoon to run the temperature up well above 90°; this with a moisture-laden atmosphere will be perfectly safe and the trees will gain by the forcing treatment. Syringe heavily twice a day while the fruits are green, but withhold directly they begin to soften, as drops of water hanging on to the points of such fruits are apt to cause blemishes. Take advantage of every close picking to ply the

syringe freely again, if only once now and then while the crop is ripening off, as the damaging of a few fruits is nothing to be compared to the loss which will occur through spider if syringing is neglected. If room can be found, tie in all shoots to full length. It is only when trees are grown in small houses that stopping is excusable, and in such houses planted-out Figs cannot be made an entire success, though stopped trees sometimes do passably well, but never give a heavy crop.

CORNUBIAN.

ORCHIDS.

LÆLIA PURPURATA VAR. MRS. R. I. MEASURES.

THIS, here figured, is one of the most charming varieties of *Lælia purpurata* in cultivation. It was obtained by Mr. R. I. Measures, Cambridge Lodge, Flodden Road, Camberwell, as a special variety from Mr. E. Kromer, who imported it direct from Brazil. The plant was first exhibited at the Drill Hall on October 26, 1897, when the Orchid committee gave it an award of merit. The flowers, though good in colour, were small, no doubt partly owing to its having been just imported, and partly to the dull surroundings of the London atmosphere at the time they were expanding. The sepals are deep rose-lilac, the petals fine in substance and form, deep rose-lilac, suffused with a darker shade on the apex, where it is also veined and feathered with a dark crimson-purple as seen in the lip. These veinings are clearly distinguishable in the illustration. The whole of the centre area of the lip is rich crimson-purple, margined with rose-purple, the surface being thickly covered with deeper coloured veinings. The side lobes are crimson, shading to yellow, which is thickly covered through the throat with longitudinal crimson-purple lines. The plant at the time the photograph was taken carried three racemes, two with five and one with three flowers.

When this plant was first shown, a cut-flowered raceme was exhibited by Mr. G. W. Law-Schofield, which was considered similar in many respects to Mr. Measures's plant, under the name of *L. p. Annie Louise*, but it had passed its best and no notice was taken of it by the committee. At the recent Temple show a finely grown plant with a two-flowered raceme was again exhibited by Mr. Law-Schofield and a first-class certificate was awarded. Alongside of this Mr. Statter exhibited a plant which was only just expanding its flowers under the name of *L. p. Statteriana*. This variety was considered altogether inferior to Mr. Schofield's and no award was made. Cut flowers of *L. p. Mrs. R. I. Measures*, though past their best, were also brought for comparison. Notwithstanding the great similarity of the three plants before them, Mr. Measures's plant having been previously dealt with and the name registered in the society's list of awards, the committee decided to adopt the name of *L. p. Annie Louise* and give it the higher award. It afterwards transpired that the plant Mr. Statter exhibited was part of the plant for which Mr. Schofield got his certificate. True, Mr. Schofield's flowers were larger than those from Mr. Measures, but the raceme brought for comparison carried five flowers, whereas *L. p. Annie Louise* only had two. Surely such a plurality of names is unnecessary, especially now the Orchid committee have the coloured drawings to fall back on. There are surely blunders enough in the nomenclature of hybrids in the past, where distinctive names have been recognised over and over again of plants from the same parentage.

Continuation of this system can only cause still greater confusion. S.

Epidendrum radiatum.—The flowers of this species are very pretty and very sweetly scented, the sepals and petals of a delicate creamy-white tint, the shell-like lip having radiating lines of bluish purple. The pseudo-bulbs are short, but the tall leaves give the plant the appearance of being stronger than it really is. Its culture is not difficult, the plant thriving well in the Cattleya house if potted in equal parts of peat and Sphagnum. It is very free-flowering, and should be rested in a cooler temperature after the flowers are past. It is a native of Mexico, and was introduced by Messrs. Loddiges in 1841.

Oncidium incurvum.—This is one of the prettiest and most easily grown and one of the most distinct of small-flowering Oncidiums, its blossoms opening now and lasting a very long time in perfect condition. Large plants of it thrive well here in a cool fernery, and the flower-

renew the compost is when the leads are starting in early spring. Besides the type there is a very pretty variety called *O. S. flavidum*, which has paler yellow flowers than the type, greenish suffusions taking the place of the brown blotches. Both this and the type like rather more heat than the species with which I have compared it, and thrive in company with *O. grande*. It is a native of Costa Rica, and first appeared among an importation of Orchids from that region in 1856, but has been collected many times since.

Odontoglossum crispum var. Lily.—This is one of the most distinct and beautiful forms yet seen. It belongs to the *O. c. Starlight* section, but the spottings in the sepals are different. The sepals are white, suffused with rose, the centre having some large brown spots and some smaller spottings at the base. The ground colour of the petals is white, tinted with rose towards the centre, the whole of the centre area and towards the base thickly covered with a suffusion of small rose-purple spots and a few small brown spots towards the base. The lip is white, shading to yellow at the disc. There are several irregular prominent brown spots in the centre and on the margin of the yellow disc. It has recently flowered in the collection of Mr. W. Thompson, Stone, Staffs.

Oncidium Lanceanum.—This is rather widely distributed naturally, and possibly to this fact may be referred its great variety and also the fact that some plants of it live and do well for quite a number of years, while others, do what one will with them, are not a success even the first season, and rapidly dwindle away. It is very queer in its likes and dislikes this way, and though liking a very hot and moist atmosphere while growing this must not be carried too far, and I believe, if it could be anyhow managed, the leaves would be finer and the plant healthier in every way if the house wherein it was growing could be well dried for an hour or two daily, ample moisture being again supplied in the evening. But to carry



Lælia purpurata Mrs. R. I. Measures. From a photograph by Geo. Champion.

ing season is the same as that of the bulbs finishing, so that the plants may be placed in drier quarters for a time to conserve the flowers and ripen the growth. The compost and treatment are the same as for the cool house Oncidiums generally, and ample moisture supplies are necessary.

Odontoglossum Schlieperianum.—There are few more useful *Odontoglossums* than this, for it flowers at a time when many of the choicer kinds are getting over and is a showy and beautiful Orchid. The spikes are erect, the flowers pale yellow and covered with blotches and spots of deeper yellow or brown. The plant is not difficult to grow in any cool, moist house, such as a greenhouse, fernery, or cool Orchid house, but it requires different treatment from the usual run such as *O. crispum* and similar kinds. The roots are much stronger than those of these well-known kinds, and like a much rougher, more open make-up of material, with plenty of crocks for drainage and larger, more roomy pots. The best time to

out this plan would in all probability lead to an attack of insects, and would therefore be productive of more harm than good. The next best plan is to give as much light as possible, so that the leaf growth is hard and well ripened by autumn. It does best in the East India house, and for compost should be given more Moss than peat, with plenty of large, rough lumps of charcoal and crocks mixed with it. The flowers occur at the base of the last-formed leaf on tall, erect spikes, the sepals and petals yellow, with spots and bars of chocolate, the lip varying in colour, but usually some tint of rose.

Lælio-Cattleya Aphrodite.—A very lovely form of this grand hybrid comes from Mr. G. W. Law-Schofield's collection. It is almost identical with *L. C. Aphrodite* var. *Ruth* that was certificated at the recent Temple show. The sepals and petals are pure white, of fine form and substance. The whole of the open portion of the labellum is of a deep crimson-purple, with the

exception of a small portion of light rose at the apex. The side lobes are white, shading to yellow at the base. It is lined and suffused at the base of the throat with bright rose-purple. The brilliant front lobe of the lip is in striking contrast to the white segments of the remaining portions of the flower. It is one of the finest varieties of this hybrid we have seen. It is sent as L.-C. Eudora var. The original name given to the hybrid that first flowered from intercrossing *C. Mendeli* and *Lælia purpurata* was L.-C. Aphrodite. The name Eudora must therefore be suppressed. It is a great pity that the plurality of names in hybrids should be of such frequent occurrence. There is no reason whatever why the published lists of hybrids should not be consulted before naming in the haphazard manner resorted to.—C.

CATTLEYA GIGAS.

This is one of the most distinct of the labiata group, as it is undoubtedly one of the finest. Strong-growing with much larger spikes of flower than any other, it is a very welcome addition to the occupants of the flowering house, which are now daily lessening in numbers. There is, perhaps, less variety in the forms of this plant than in the other members of the section, but there are a few well-marked ones, and a poor *C. gigas* is very seldom seen. Plants usually arrive in good condition, the additional strength probably enabling them to pass the journey with less exhaustion than those that are weaker with smaller bulbs. In selecting plants the preference must be given to those having healthy-looking foliage, firm at the axils, and with the eyes at the base of the pseudo-bulbs dormant, not started into growth and turning white through want of light. These blanched growths may sometimes recover their colour and grow away all right, but in most cases they soon daup off or shrivel up when the light reaches them. Should no others be obtainable, the most likely way to bring them round is not to expose them more than is avoidable to draught, cold air, or bright light, but to place them at once in a shady, moist, and fairly warm house, where, if all goes well, they will regain their colour by degrees and go on growing, eventually forming pseudo-bulbs in the usual way.

Some of the growths, it may be, will have lengthened out considerably and will have long white points. These are far better removed at once, as in all probability they will die, and even if they do not the leaves and bulbs must of necessity be malformed when they do appear. With such plants back breaks have, of course, to be depended upon, and these are as a rule fairly strong on *C. gigas*. The plants often flower at once upon the newly-made growths, and as we like to see what the variety is, it is usual to let the flowers open. But the sooner they are removed the better, as the plant is not sufficiently established to carry them over a long season and they weaken it unnecessarily. Although such a strong grower, I have never found *C. gigas* to have a liking for particularly large pots, and it always flowers more freely when the roots are feeling the sides of the pot or pan. This makes it all the easier to arrange for the plants to be suspended near the roof-glass, in which position the growth is finer and always well ripened, almost ensuring freedom of blooming. In this connection it may be noted that occasionally there are plants of this species that seem to defy all efforts to make them bloom, while others have a habit of flowering regularly twice a year. The best plants and most long-living under cultivation are those that keep dormant through the winter after flowering in July. But I have never found

any advantage in trying to force or to check their growing propensities, and leave them all the year round in a warm, sunny position in the Cattleya house temperature. The treatment as to compost, potting and watering when in growth or at rest does not differ from that of other labiata Cattleyas. In a good form of *C. gigas* the flowers will measure nearly 8 inches across, so that when five or six are produced on a spike a very fine effect is produced. The sepals and petals are rosy purple or mauve. The lip is much deeper in colour, except for a pale eye-like blotch on either side of the column, which is more or less marked in different plants. This species was first discovered by M. Warszewicz in New Grenada about the year 1848, but many of the plants he collected were lost and the species remained very rare until sent home in quantity about thirty years ago. It was named *C. Warszewiczii* by Professor Reichenbach, but is much better known as *C. gigas*.

Odontoglossum Harryano-crispum.—This lovely hybrid was recently noted in flower in the collection of Sir Frederick Wigan, Clare Lawn, East Sheen. The hybrid is of continental origin, having been purchased last year as the reverse cross of the plant which gained a first-class certificate at the Temple show of 1898. It is the result of intercrossing *O. Harryanum* with the pollen of *O. crispum*. The ground colour of the sepals is white, suffused with rose-purple on the apical halves, with numerous dark brown blotches and spots through the centre area, and several smaller spots on the outer margins. The ground colour of the petals at the base is white, with numerous bright purple spottings almost forming a solid blotch. The ground colour on the apical half is tinted with yellow on the outer edges and suffused with rose at the apex. There is almost a solid blotch of reddish brown covering the centre area. The lip is white when first expanded, with a bright yellow disc. The ground colour as the flower gets older changes to lemon-yellow. In the centre are numerous bright purple spots, outside these there is a thickly spotted band of violet-purple. The habit of growth has the intermediate characteristics of the two species used in its production. It differs from *O. crispum* principally in the broader and finer marked lip, and is much more like *O. Rolfei* (*O. Pescatorei* × *Harryanum*) in this particular respect than the hybrid shown at the Temple on the above date. It is a most desirable and useful addition.—H. J. C.

Lælio-Cattleya Dominiana var. Frances Mary.—A cut flower of this has been sent from Mr. G. W. Law-Schofield, Newhall Hey, Rawten-stall. In comparison with hybrids of L.-C. Dominiana raised by Messrs. Veitch, it differs principally in its slightly darker segments, and the lines in the throat as seen in the typical forms are entirely suppressed in Mr. Schofield's flower by a heavy suffusion of brownish purple. It was purchased as of unknown parentage, and is of continental origin. The sepals are of an intense rosy lilac colour. The petals, similar in colour to the sepals, have a slightly darker suffusion through the centre. The front lobe of the lip is rich crimson, becoming suffused with velvety crimson in the centre. There are numerous darker coloured veins running through the front lobe. The side lobes are crimson-purple in front, rose at the back. Over the whole of the base and the throat is a suffusion of deep brownish purple, giving it a most distinct appearance. This hybrid was exhibited at the last meeting of the Royal Horticultural Society in June as L.-C. Fire King, parentage unrecorded, but the Orchid committee, after a reference to their coloured drawings of plants previously certificated, determined it to be clearly a form of L.-C. Dominiana, and certificated it as L.-C. D. var. Fire King. On the following Thursday this plant was again shown at the Manchester and North of England Orchid Society's

meeting and certificated as L.-C. Fire King. Mr. Schofield's plant, which is from the same pad of seed, was also exhibited at the same time and received a first-class certificate as L.-C. Fire King var. Frances Mary.—S.

BOOKS.

ALBUM DES ORCHIDÉES.*

This is a very clearly written and well illustrated monograph of the hardy Orchids found wild in the centre and south of Europe, and including most if not all the species found in Great Britain and Ireland. It is composed of six chapters dealing with—1, generic characters; 2, fertilisation by insects, &c.; 3, classification; 4, our Orchids, their mode of growth, their geographical distribution, and their variation; 5, study, culture, and acclimatisation of Orchids; 6, description, &c., of the sixty species illustrated by coloured plates.

The work itself is a large octavo, about the size of the *Botanical Magazine*. It is well printed, and the plates are carefully drawn and neatly printed in colour, each having underneath the figure the name of the species in French, English and German, as also the conditions of the locality or habitat, &c., where it naturally grows wild. For the hardy Orchid amateur, or for those cultivators who may wish to grow these exquisite, even if capricious, little flowers there is no better handbook, and it will, moreover, interest all who are fond of wild flowers and like to know their history. Although all European Orchids are supposed to be terrestrial species, we may, nevertheless, discover the beginning of epiphytal conditions in the genera *Malaxis* and *Liparis*. The former is found growing upon living *Sphagnum* and the latter upon tufts of *Rushes*, and both have above-ground stems or pseudo-bulbs, and not underground tubers so common to the majority of terrestrial kinds. The rare Irish Ladies' Tresses (*Spiranthes Romanzoviana*) is figured in black and white and alluded to as being limited to one locality at Bearhaven, near to Castletown, in Bantry Bay, but it is now known to exist in other Irish localities, so that there is really no fear of its total extinction for many years to come. It is perhaps of all our native species the most interesting, even if also not the rarest, found in Kerry, Armagh and Londonderry, in Ireland. It is not known in England nor elsewhere in Europe, but is said to be found in the United States at intervals all the way from New York to San Francisco. In England perhaps the head centre of our native Orchids is on the chalk downs of Kent, where the weird Lizard Orchis has again been found after a lapse of nearly forty years. No less than thirty-three out of a total of forty-four British Orchids are found in Kent, and as they are rarely seen except when in full bloom, it is to be hoped that they will never be exterminated, as so many of our rarer wild flowers have been during recent years.

We can boast of two epiphytal Orchids only in Britain, but we have also one or two leafless saphrophytes with short, swollen, coral-like roots, in each of the cortical cells of which is a mass of fungous spawn threads, or mycorrhiza. This association of fungous spawn threads and a root is common in many plants such as *White Poplar*, *Alder*, *conifers*, many *Ericaceæ* and *Cupuliferae*, and is not strictly parasitism, but really a subtle kind of symbiosis by which both guest and host plants are mutually benefited. Orchids such as *Limnorchis abortivum*, *Epipogon aphyllum*, and *Neottia nidus-avis*, which are leafless, and even some of the leafy kinds, enjoy the benefits of this symbiosis or co-operation. MM. Bonnier and Ed. Griffon found that in their power of assimilating carbonic dioxide terrestrial Orchids showed a sliding scale of capabilities. The green-leaved species, such as *Epipactis* and others, having no

* "Album des Orchidées de l'Europe Centrale et Septentrionale." Par H. Correvon. Soixante planches colorées; pp. 92. Geneva and Paris. 1899.

† *Comptes rendus*, December 5, 1898.

root-fungus could abstract all the requisite carbon from the air during sunlight by their green leaves. On the other hand, all the Orchids such as *Neottia*, *Coralorrhiza*, *Epipogon*, &c., are wholly saprophytic, and can only obtain the carbon, &c., necessary for their due nutrition from humus by the aid of fungous mycelia. Some species of green-leaved Orchises even avail themselves of the aid of mycelia, and so become partially saprophytic. In a manner these form an intermediate group between the true terrestrial Orchids and the true saprophytes. This need of fungous co-operation in some of the species may to some extent explain the difficulty practical growers so often experience in cultivating terrestrial Orchids in our gardens.

After all it is in the woods and fields and on the chalk downs that our native Orchids are at their best, and one advantage possessed by M. Correvon's hand-book is that the plants are so carefully figured that there is no difficulty in at once recognising any of the species we may happen to meet with in our rambles either at home or on the Continent.

F. W. BURBIDGE.

MURRAY'S HAND-BOOK OF SOMERSETSHIRE.

VERY opportunely at this time of the year one of Mr. Murray's guides comes to remind us that Somersetshire, one of the most lovely, if not quite the loveliest, of counties, ought not to be neglected by persons bent on making holiday. In former editions bound up with Wilts and Dorset, the county has now a volume all to itself. Probably no county is more rich in archaeological and antiquarian interest. The number and richness of its ecclesiastical foundations, as evidenced by what remains of them, must have been surprisingly great even in those days. Its hillsides and valleys are dotted over with venerable shrines. Its gardens and country seats can compare with those of any other county; witness Longleat, Montacute, and many others. Its river, winding among sometimes wild, always beautiful scenery, is one of the most charming. The editor has omitted none of these things from his survey. The book is clearly printed, light and handy to carry. There are several maps, including a detached general map of the county. The price is 6s.

STOVE AND GREENHOUSE.

ACALYPHA GODSEFFIANA.

THIS is one of the numerous species and varieties of *Acalypha* which have handsomely variegated leaves and grow rapidly into large shrubs. They are consequently largely grown in tropical and sub-tropical gardens in much the same way as we grow common *Aucuba*. They are also valuable as stove plants in this country, such sorts as *Wilkesiana*, *obovata*, *marginata*, *Macfeeana*, *Chantrieri* and *musaica* being not uncommon among the tropical plants cultivated in English gardens. Some of these at least are merely varieties of *Wilkesiana*, and probably *A. Godseffiana* is another. It has, however, been accepted by Dr. Masters as a good garden species. It was one of the new plants shown by Messrs. F. Sander and Co. at the Ghent Quinquennial last year, and it has won general admiration both last year and this when shown at exhibitions in this country. Messrs. Sander and Co. state that it was discovered in New Guinea by M. Micholitz. They recommend it as a bedding plant for warm situations, as it did well in the open air in the summer of 1898 at St. Albans, forming compact, dwarf, leafy plants, evenly and exquisitely variegated with white, green and yellow, the white encircling the whole leaf. They also recommend it for

winter use, for which purpose it should be ripened outside in autumn. When well matured the plants should be removed into a warm, moist house, where they will burst into new growth and remain as bright as tricolor *Pelargoniums* all through the winter months.

At Kew it has proved of the easiest possible culture and a most useful plant for brightening up collections of indoor fine-foliaged plants.

W. W.

Coleus Beckwith Gem.—*Coleuses* no doubt have lost favour considerably, and rightly so, I think, for they take up a lot of valuable room which might be more profitably utilised for the growth of better things, and which, moreover, remain in their full beauty a much longer time.

produced on slender, arching stalks, which after a time droop in a graceful manner and produce on their ends several tiny plants. When a basket is furnished with a pendulous fringe of these young plants it forms a decidedly attractive feature. In a moist atmosphere they commence to root while still hanging, and finally drop, when, if the conditions are at all favourable, they soon become established. In this way the plant can be rapidly increased. It is a native of New Calabar, and was, I believe, first introduced to Kew, but it is now in the hands of several of our nurserymen.—H. P.

Adenocalymna nitidum.—This Brazilian climbing plant forms a very noticeable feature just now in the Victoria Lily house at Kew, where it clothes a portion of the roof. The upper part of the plant is laden with blossoms, borne on the



Acalypha Godseffiana. From a photograph by Col. Taylor, Norbiton.

In spite of this, I find the above-named variety very useful and ornamental grown into tolerably large plants for standing in large vases in windows and corridors. It is the best kind I am acquainted with for the purpose, for it is a free grower, producing bold leaves of rich telling colours. There is an advantage in growing these kinds of plants for such unfavourable positions, for as they become shabby they can be thrown away and are easily replaced by others of the same class.—J. R.

Cyperus fertilis.—This is a very distinct species of *Cyperus* that is seen to the best advantage when grown in a suspended pot or basket. The bright green leaves, each about 6 inches long and nearly an inch wide, are arranged in a regular rosette. From this tuft the flower-spikes are

slender secondary shoots, which are more or less pendulous. At the first glance the flowers suggest those of an *Allamanda*, but closer inspection reveals the fact that they are in shape just like a *Bignonia*, to which genus this *Adenocalymna* is nearly related. The colour of the flowers is a deep golden-yellow, and they are about 3 inches in diameter. It is indeed a noble climber for such a position—that is, on a hot, sunny roof in a lofty structure kept at a stove temperature, for it would be useless to expect flower if cut and cribbed or if heavily shaded. A good companion to it, also blooming freely in the same structure and under similar conditions, is *Thunbergia grandiflora*, whose large pale blue blossoms, each from 3 inches to 4 inches in diameter, are borne in great profusion and for a lengthened period.

Such vigorous climbers as these that are needed to cover a considerable space should be planted out, as it is difficult to keep them in good condition in pots. At the same time a border should be prepared for them, as, given unlimited room, more growth than flowers may result.—H. P.

CALIFORNIAN NOTES.

THE spring in California has done much towards atoning for the dry winter. There have been several timely rains, and long-continued cool weather has, by reducing evaporation, conserved the moisture in the soil. It is now (June 3) close to harvest time, and for Northern and Central California as a whole the prospects for all crops are very gratifying. The crop of grain varies from an immense yield in the central coast belt to a half crop or less in portions of the San Joaquin valley. In the great wheat-producing sections the crop will be splendid. In fruit the yield will be very large, although the crop is spotted. In some places Apricots are very short, and the general opinion is that Prunes will fall far short, while Peaches will be exceptionally heavy. Beet sugar has become a large factor in several localities, and the Beet crop is promising. Large refineries are built in favourable sections and contract for the Beets with the farmers. The sugar industry is one of the most promising.

At my mountain garden on May 29 I picked fresh flowers of *Narcissus poeticus* fl.-pl. and breeder Tulips, also of *Lilium columbianum* and *L. washingtonianum*. On the way I noticed *Nemophila insignis* in full flower, while lower, *Pentstemon heterophyllus* and *Clarkias* were flowering—rather a jumbling of seasons within a mile I thought. There is scarcely any difference between the flora of our mountain-tops hereabout and of the valleys below. They are later, and that is about all. *Brodiaea californica*, now flowering in good form with me, is when well grown a large plant. It grows from 24 inches to 30 inches high, with flowers 1½ inches to 2 inches across and as long. A pure white sport is very effective, and could it be propagated would be very desirable for cutting.

In my notes of March 19, 1898, I described *Synthyris reniformis* as being white, and at a later date Mr. Arnott referred to the matter, stating that as usually grown it is purplish. To be sure that I was not in error, I waited until this season and carefully noted the colour. As it grows here the flowers are white, faintly tinged with pinkish purple. I have known and flowered for many years what was called by all of our botanists *Fritillaria biflora* without in the least doubting that I had the correct thing. This spring a lot of *Fritillaria* bulbs from Southern California flowered here and proved to be what I had never seen before, the true original *F. biflora*. These *Fritillaries* grow to a height of 4 inches to 8 inches with a stout stem, and bear leaves in the manner of *F. liliacea* and *F. pluriflora*. The flowers are very large for the size of the plants, broadly bell-shaped, the tips of the segments recurved and of a very deep rich brownish purple colour, the capsules very large. It is in every way a very attractive plant. The plant I have long known as *F. biflora* has the same leaves, but the flower is more narrowly campanulate, the tips slightly incurving; colour greenish, lined with brown-purple. *F. liliacea*, *F. biflora*, and the other just described, *F. pluriflora*, and *F. glauca* of South-western Oregon form a group very much alike in bulb, leaf, and general shape of flower. To these five will probably be added a sixth, which came to me from Hum-

boldt Co., California, this spring, in which the flower appears to be white, marked with purple. I defer naming it until bulbs flower next spring. All of these are interesting, easily-grown plants, and *F. biflora* and *F. pluriflora* are among the finest *Fritillaries* that I know.

Ukiah, California.

CARL PURDY.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

JULY 11.

IF only for the change in the exhibits as a whole, and equally in the manner of arranging, the displays of flowering and other plants at the hybrid conference on Tuesday at the society's gardens at Chiswick were decidedly welcome and full of interest. It was not a day for the exhibitors of all the plants, large or small, that may be in flower, but rather a sort of ingathering from as large an area as was possible under the circumstances of a great variety of hybrid or cross-bred plants that individually are possessed of an interesting history. In this particular way the exhibition, if we may so term it, was quite unique in so far as it related to plants all meritorious in themselves, and, indeed, in many instances already the possessors of the hall-mark of horticulture. This being so, it is scarcely necessary to add that *Orchids* and *Rhododendrons* figured largely in the display, while *M. Marliac's* Water Lilies as representing hardy things—such, too, as may be enjoyed to the full in the hot summer days in the open air—were welcome and beautiful. It was, however, a disappointment to many who brought small exhibits of this or that hybrid or cross-bred plant that little or no notice was taken of such, and that no questions or other information were requested from the raisers. The plants were there; the cut specimens were there, some from long distances, but, so far as we are aware, no one to refer to their merits or otherwise—a subject which we think might have been undertaken by the several committees, assisted by the raisers of the plants themselves. As it was, the cards placed with the exhibits had to suffice, and though these contained very ample details, these might surely have been amplified in a very interesting way.

Orchid Committee.

First-class certificates were adjudged to the following:—

CATTLEYA HARRISONÆ ALBA.—This is a lovely pure white form of this well-known species, the base of the lip showing the faintest tinge of greenish yellow. The plant carried a two-flowered raceme. From the Rev. F. Paynter, Stoke Hill, Guildford.

LELIO-CATTLEYA DUVALIANA (*L. purpurata* × *C. Luddemanniana*).—The sepals are considerably curled, pale rose, the petals very much deflexed, similar in colour to the sepals. The lip is of a most extraordinary colour, rich distinct shade of maroon-crimson. The side lobes, of the same colour, shading to yellow, are lined and suffused through the base of the throat with rich purple. From M. Maron, Brunoy, France.

Awards of merit were adjudged to the following:—

LELIO CATTLEYA MARTINETI (*C. Mossiæ* × *L. tenebrosa*).—The sepals and petals are pale lilac, the front lobe of the lip and outer margins similar in colour, heavily veined and suffused with rich crimson over the central and basal areas; the side lobes suffused with the same colour and having some yellow at the base. The plant carried a two-flowered raceme. From M. Maron.

LELIO-CATTLEYA ADOLPHUS (*L. cinnabarina* × *C. Aclandiae*).—The sepals and petals are deep yellow, slightly spotted with purple, the lip yellow, suffused and heavily veined with rich crimson. The plant carried two flowers. From the Rev. F. Paynter.

CYPRIPEDIUM SCHILLIANUM (*C. Goweri* × *C. Rothschildianum*).—This is a lovely form, to which the Veitch Memorial medal was awarded, but it was afterwards pointed out that the plant had been shown at Manchester last week, and the medal was accordingly withheld. The dorsal sepal is white, shading to green at the base, and heavily lined and spotted with dark brown. The petals are pale green, heavily spotted with dark brown, the outer margins being thickly covered with rich purple hairs. The lip is deep purple, shading to green at the base. The plant carried a two-flowered raceme. From Mr. G. W. Low-Schofield.

CYPRIPEDIUM STONEI CANDIDUM differs from the typical form in having pure white upper and lower sepals and lighter petals. The plant carried a three-flowered raceme. From Sir F. Wigan, Bt.

EPI-LELIA CHARLESWORTHII (*L. cinnabarina* × *Epidendrum radicans*).—The sepals and petals are deep orange, suffused with a bright shade of scarlet, the lip orange in front, shading to yellow, with a few spots of purple around the column. The flowers are produced in clusters, as in *Epidendrum radicans*. From Messrs. J. Veitch and Sons.

LELIA TENEBROSA GIGANTEA.—This is an exceptionally large and highly-coloured form, the sepals and petals being deep purple, the lip deep rose, shading to crimson-purple in the centre and through the basal portions of the throat. The flowers are of fine form and substance. From Sir F. Wigan, Bart.

Messrs. J. Veitch and Sons sent a choice group of hybrids, and in most instances the parents used in their production. The most prominent of the hybrids was a fine plant of *Phalenopsis Luddeviolacea* (*P. violacea* × *P. Luddemanniana*), the flowers larger than in either of the parents, the sepals and petals rosy violet, marbled with white, the lip crimson-purple, with some yellow at the base. In *Disa Veitchi* (*D. grandiflora* × *D. racemosa*) the flowers are of two shades of bright rose. *Sobralia Veitchi* (*S. macrantha* × *S. xantholeuca*) has the sepals and petals delicate lilac, the lip of a darker shade of rose, and yellow through the throat. In *Dendrobium rhodostoma* the flowers are white, tipped with deep purple. *Epidendrum elegantulum*, *E. O'Brienianum*, *E. radicante-vitellinum*, derived from the species indicated in the name; *Spathoglottis aureo-Viellardi*, with its yellow and purple flowers; and *Epiphrontis Veitchi*, with five spikes of its yellow and scarlet flowers, were also shown. *Odontoglossum excelens* was represented by a pale form. Among the *Cattleya* hybrids were *Lelio-Cattleya Canhamiana* (*L. purpurata* × *C. Mossiæ*), *L.-C. Aphrodite* (*L. purpurata* × *C. Mendeli*), *L.-C. eximia* (*L. purpurata* × *C. Warneri*), *L.-C. Stella*, and *L.-C. Zephyra*. Among the *Cypripediums* were included such well-known forms as *C. Harrisonianum* superbum, *C. Orphanum*, *C. superciliosum*, *C. Drurio-Lawrenceanum*, *C. Cupid* (*C. cardinale* × *C. Lindleyanum*), *C. leucorrhoda*, *C. marmorophyllum*, *C. Alice*, *C. Ashburtonea*, *C. selligerum*, *C. Morganæ*, *C. Euryale*, *C. vernixium*, and *C. grande*. *Thunia Veitchi* was also included. Messrs. Hugh Low and Co. sent a choice group of hybrids and a few select varieties of *Cattleya*; among the latter was *C. Mendeli enfieldensis*, white, except the faintest tint of colour in the centre of the front lobe of the lip. A light form of *C. Gaskelliana* with very similar characteristics and a white form of *C. Eldorado* were also included. The hybrid *Cypripediums* included *C. P'Ansoni giganteum* (*C. Rothschildianum* × *C. Morganæ*), the dorsal sepal creamy yellow, suffused with purple towards the base, lined at intervals with brown-purple veinings, the petals greenish white, suffused with brown at the margins and thickly covered with deep brown spots; the lip purple, mottled with creamy yellow. The flower had a double column, yellow, thickly covered with bright purple hairs. The two parents were also included. *C. Lawrenceano-Mastersianum*, derived from the parents indicated in the name, had the intermediate characteristics of the two species used in its production.

C. selligerum (*C. barbatum* × *C. Stonei*), *C. Alice* (*C. Spicerianum* × *C. Stonei*), a beautiful form of *C. T. W. Bond* (*C. hirsutissimum* × *C. Curtisi*) *C. Milmani* (*C. philippinense* × *C. Lawrenceanum*), *C. Alfred Hollington* (*C. philippinense* × *C. ciliolare*), an exceedingly dark form, having the intermediate characteristics of the parents, *C. De Witt Smith* (*C. Lowi* × *C. Spicerianum*), *C. superciliale*, and a plant of *Laelio-Cattleya Arnoldiana* with two flowers were also included. Messrs. F. Sander and Co. sent *Cypripedium Adrien de Germiny* (*C. Swanianum* × *C. Rothschildianum*), *C. Premier* (*C. buchanense* × *C. Rothschildianum*), *C. Duches of Sutherland* (*C. Youngianum* × *C. Rothschildianum*), *C. Garbari* (*C. Lawrenceanum* × *C. Rothschildianum*), *C. A. de Lairese* (*C. Curtisi* × *C. Rothschildianum*), and *C. Lady Maple*. Sir F. Wigan sent *L.-C. Arnoldiana*, *L.-C. eximia*, *L.-C. Canhamiana*, *Laelia Euterpe*, *Cypripedium macropterum*, and *C. Gertrude Hollington*.

Sir T. Lawrence sent the lovely *Vanda Agnes Joaquim* (*V. teres* × *V. Hookeri*) with three racemes of flowers, several *Cypripediums*, *Disa kewensis*, *Odontoglossum excellens*, *Masdevallia Ajax*, *M. Hincksiana*, *Cattleya Breautiana* (*C. Leddigesi* × *C. superba*), and *Epiphronitis Veitchi* with four spikes. M. Maron sent a choice lot of hybrid *Cattleyas*, which included *L.-C. callistoglossa*, a dark form of *L.-C. Henry Greenwood*, *L.-C. Canhamiana*, *L.-C. Eudora*, *L.-C. Berthe Fournier* (*L. elegans* × *C. aurea*), *L.-C. intermedia flava*, *L.-C. radiata* (*L. purpurata* × *C. dolosa*), *Cattleya punctulata* and *Laelia nigrescens* (*L. pumila* × *L. tenebrosa*). Mr. C. Ingram sent *Cattleya Firebrand* (*L.-C. elegans Schilleriana* × *C. Lawrenceana*), which had the intermediate characters of the parents. Mr. W. Cobb showed the beautiful *Cypripedium l'Ansoni*, which was certificated last year, and was a great improvement on what it was when exhibited then. It is undoubtedly one of the best of this section. Mr. de B. Crawshaw showed *Odontoglossum crispum* Mrs. de B. Crawshaw with white flowers of good form, *O. c. Crawshayanum* with heavily spotted flowers, and a home-raised hybrid in *O. Cooksoni*, Crawshaw's variety (*O. Halli* × *O. crispum*). This might have passed for a form of *O. Wilckeanum*.

Floral Committee.

The following received the award of merit :—

CALADIUM A. SIEBERT.—This is one of the new type of *Caladiums*, having the leaf lobes suppressed, the group generally being of a harder nature than the larger growing forms. In this instance the red ground colour is surrounded by a green margin to the distinctly undulated leaf. From Messrs. F. Sander and Co., St. Albans.

DELPHINIUM MICHAEL LANDO.—This kind has a dense spike of the deepest indigo-blue, the flowers of large size and very showy. From Messrs. Jas. Veitch and Sons, Chelsea.

CARNATION HEATHER BELL.—A good yellow ground with scarlet lines, the flowers large and possessed of a perfect calyx. The flowers were cut from the open. From Mr. J. Douglas, Great Bookham.

CARNATION THE BARON.—A dark coloured fancy of medium size and excellent form : a very desirable kind in this section. From Mr. Douglas.

CARNATION ROSALIND is a rich dark purple-crimson self of capital size and form. From Mr. Douglas.

DIANTHUS BARBATUS ELIZABETH.—A clear and distinct salmon-pink coloured Sweet William, which appears identical with Messrs. Sutton's *Salmon Queen*. It is fully 18 inches high, free in habit, and a great bloomer. The plants, which were in pots, came from Viscountess Enfield, Barnet.

CALADIUM MITJANA.—A very striking form, with richly coloured, almost ruby-red foliage. From Mr. McLeod, Dover House Gardens, Rochester.

PELARGONIUM (ZONAL) COUNTESS OF DERBY.—A very fine salmon-pink, with a suffusion of lighter

pink near the edge of the flower. From Messrs. Cannell and Sons, Swanley.

PELARGONIUM CASSIOPE.—This is a clear soft pink, with a distinct, though small, white eye. The form is also good. From Messrs. Pearson, Chilwell, Notts.

VIOLA PENCAITLAND.—A good tufted bedding kind, the flowers white with lemon centre, very compact habit. From Messrs. Dobbie, Rothesay.

VIOLA J. B. RIDING.—A well-known kind; flowers rose-purple, a striking kind. From Messrs. Dobbie and Co. and Mr. J. Forbes, Hawick.

VIOLA ARCHIBALD GRANT.—Perhaps the most vigorous of the tufted strain, the rich deep violet-purple flowers being borne on stems fully 8 inches high. It is somewhat later to flower than many kinds, but is not surpassed, or even equalled, for its holdness, fine colour and constitution. From Messrs. Dobbie and Co. and Mr. J. Forbes, Hawick.

VIOLA JACKANAPES.—This partakes of the typical *Viola* in form, with the lower petal smaller than the rest. The lower petals are gold, with a brown-velvet shade in the upper petals. From Mr. J. Forbes, Hawick.

ROSE WHITE MAMAN COCHET.—This is a pure white form of the ever-popular *Maman Cochet*, which it resembles. It is a lovely Tea Rose of great beauty. From Messrs. W. Paul and Son.

ROSE MME. CADEAU RAMEY.—A Hybrid Tea of good form, the flowers soft or delicate flesh colour and white. It is very free flowering. From W. Paul and Son.

Messrs. James Veitch and Sons, Ltd., Chelsea, contributed largely to the actual display, most noticeably by their group of *Rhododendrons*, the hybrids resulting chiefly from the crossing of *javanicum* and *jasminiflorum*, the forms originally raised from these being again employed as one or both of the parents. These *Rhododendrons* are a very striking lot, but the majority having been frequently noticed we refrain from a list of names. One of the finest, however, is *Souvenir de J. H. Mangles*, raised from *javanicum* and *Crown Princess of Germany*, the latter a yellow kind. *Ne Plus Ultra*, a kind having flowers of an almost vermilion orange hue, is considered the finest of all this race, at least from a colour point of view. This last was raised from *javanicum* and *Duchess of Edinburgh*, the former the seed parent and the latter the pollen parent. The Messrs. Veitch also staged a fine collection of hybrid *Nepenthes*, exhibiting either pitchers or plants of the parents with each. Another remarkable group from the same source may be termed graft hybrids, mostly of trees and shrubs and the like. A few of the examples were *Photinia* grafted on *Quince*, *Phillyrea* on *Ligustrum*, and the same plant on *Olea*, *Choisya* on the *Skimmia* being also shown among a large variety of plants, some of which, however, did not appear of a robust or flourishing character. Hybrid Water Lilies were also shown by Messrs. Veitch, and *Kalo-Rocha langleyensis*, with a small head of bloom, having resulted from crossing *Kalosanthes coccinea* and *Rocha falcata*. The hybrid, however, is a long way behind either of the parents in its decorative effect. *Delphiniums*, *Begonias*, *Streptocarpus*, and a group of some forty-two supposed hybrid Ferns were also in evidence, *Adiantums*, *Gymnogrammas*, *Polypodiums*, &c., figuring strongly in the latter group. A group of Ferns, dried specimens and living examples, with full and liberal details, was contributed by Mr. C. T. Drury. Messrs. Jackman and Sons, Woking, had a good display of their cross-bred *Clematises*, which are well known and as greatly valued. A very distinct hybrid *Day Lily*, *Homocallis Pioneer*, was stated to be raised from *H. aurantiaca* (?) as pollen parent and *H. Thunbergi* as seed parent. The pollen plant, however, was the single form of *H. disticha*, and quite distinct from *H. aurantiaca* both in foliage and in flower. The hybrid carries largely the form of the seed parent, while the foliage is intermediate between that of the parents. It came from Mr. G. Yeld, Clifton Cottage, York. A beautiful lot of Sweet Peas came from Mr. Eck-

ford, Wem, Salop, and contained some pretty shades of colour. From Cambridge Mr. Lynch brought the last fragments of the *Cinerarias* that have proved so valuable in the raising of the new race of these flowers. Some *Caladiums* of the new type came from Messrs. F. Sander and Co., St. Albans, one of which, *C. A. Siebert*, is very rich in colour. The hybrid *Campanula Balchiniana* was, with the parents, *C. isophylla* and *C. fragilis*, exhibited by Mr. Richard Dean, Ealing, Mr. E. H. Jenkins, Hampton Hill, also contributing two cross-bred *Campanulas*, the result of crossing *C. isophylla* alba with pollen of *C. pyramidalis alba*. Only one plant was in flower, and this was almost a reversion to the typical *Campanula isophylla*, absolutely uninfluenced by the pollen parent and equally so the seed parent in so far as colour was concerned. Some good *Carnations* were shown by Mr. Douglas, and Sweet Peas by Messrs. Dobbie and Co., Rothesay. *Lilium Marhan* and *Hymenocallis macrostephana* came from C. G. van Tubergen, Haarlem, Holland.

The lovely batch of hybrid Water Lilies from Mr. Leopold de Rothschild, Gunnersbury House (Mr. Jas. Hudson, gardener), was perhaps the most fascinating group in the entire exhibition. There were some twenty-six varieties of these lovely things, arranged in a perfectly natural way in large, spacious pans on the floor, the receptacles completely hidden by the foliage of the Lilies and a margin of fresh green Moss. These were deliciously cool and refreshing in the sultry tropical heat of the great conservatory. Foremost was the lovely blue-flowered *stellata*, so valuable with its long stems, and around such things as *Marliacea rosea*, *M. albidia*, both in grand form; *M. carminata*, *M. Chromatella*, *M. rubro punctata*, &c., while among the odorata group were *o. rosacea*, *o. Exquisita*, and besides these the rich-flowered *igneae*, *Robinsoni* with gold stamens, *lucida*, *gloriosa*, and others. The great vigour and freshness formed quite a feature in the group, which was backed by *Nicotiana sylvestris*, a fine Tobacco, with long tubular white flowers that while drooping in the sunlight do not entirely close. It is a striking plant, fully 4 feet high. A very remarkable exhibit was that of *Clematises* and *Roses* from MM. Morel et fils, 33, Rue de Souvenir, Lyons, the former group being well represented by some half-dozen boxes of blooms all carefully grouped and arranged with the parents of each. The *Roses* shown were chiefly of a decorative character, and, considering the distance traversed, were quite fresh at the opening of the conference. *Roses*, too, were abundant from Messrs. Paul and Son, Cheshunt, and Wm. Paul and Son, Waltham Cross, Teas and Hybrid Teas and decorative kinds being chiefly shown in each instance. Perhaps one of the most valuable things, both from its showy character and, indeed, from a commercial standpoint also, was the new *Kalanchoe flammea* from Somaliland sent from the Royal Gardens, Kew. A group of this at the entrance to the conservatory attracted the attention of all-comers. It is a most remarkable plant, almost as vivid in its colouring as is the well-known *Crassula coccinea*, though not of this shade of colour. The flowers, which are freely disposed in flattish forked corymbs, are of a decided red-orange tone. It appears the plant has already been in flower some weeks at Kew, and succeeds admirably in an airy house. It is certainly an acquisition. Of special interest, as indicating what may be accomplished by an individual in one particular branch of horticulture, was the group of Ferns raised entirely by Mr. H. B. May, Edmonton. Here were *Aspleniums*, *Adiantums*, *Gymnogrammas*, *Pterises*, *Davallias*, and others, the following being a few of the most conspicuous: *Adiantum fasciculatum*, raised from *A. fragrantissimum*, *Asplenium Mayi* from *A. Baptisti*, *Davallia insignis* from *D. elegans*, *Gymnogramma flavescens* from *G. peruviana*, *Pteris tremula grandiceps* from *P. tremula*, *P. Raginæ* from *P. Victoriae*, *Lunaria ciliata fimbriata* from *L. ciliata major*, *Polypodium Mayi*

from *P. glaucum*, and *P. glaucum cristatum* from the same source. In all some eighty-five varieties were shown—a highly creditable display for at least one group and one department. Messrs. Wallace, Colchester, had *Lilium Burbanki*, which, said to be derived from *L. Washingtonianum* as seed parent and *L. pardalinum* pollen parent, showed the greatest evidence in favour of the latter, the hybrid *L. Dalhousii* from *L. dalmaticum* seed parent and *L. Hansonii* pollen parent being also shown. MM. Duval et fils, 8, Rue de l'Ermitage, Versailles, staged a very remarkable set of *Vriesias*, with *Tillandsia Duvali*, *T. Lindeni* major, and *T. L. superba*, the former group being of a varied and striking character; while Messrs. Barr and Sons showed a group of Japan Irises of considerable variety and colour, with other hardy flowering things that had but little in common with the object of this particular gathering.

Fruit Committee.

The committee met on June 29 at Chiswick to examine the Peas and Lettuces sent in for trial. Over sixty varieties of Peas were on trial, but the season has not been altogether favourable. Some kinds showed but little advance on older kinds, whilst a few failed to reach the ordinary standard of merit. All the varieties were sown the first week in March. Among the Lettuces there was nothing new. The older kinds, such as Brown Cos and Paris White, were good in this section. Among Cabbage varieties, Crystal Palace, Continuity, White Dutch, and All the Year Round were good. A very late Broccoli, seed of which came from Mr. Beale, Loughborough, if it can be kept true, will be suitable for private garden supplies.

A very large number of members attended the meeting at Chiswick on July 11, but comparatively few exhibits attracted notice so far as fruit and vegetables were concerned.

A first-class certificate was given to

RASPBERRY GOLDEN QUEEN, a perfect fruit as regards size and shape. It is the result of crossing the well-known Superlative with *Rubus laciniatus*. It is of good flavour, a free bearer, and in this respect resembles Superlative. An award of merit was given it in July, 1898. From Messrs. Veitch and Sons.

Awards of merit were given to the following:—

STRAWBERRY LORD KITCHENER.—This is a fine large dark-coloured berry, the deep crimson colour running through the fruit. It is the result of crossing British Queen with Waterloo, and mostly resembles the latter in size and colour. From Messrs. Veitch, Ltd., Chelsea.

PEA GLORY OF DEVON.—Pods of a deep green colour, having eight to ten peas in each, of excellent flavour. It grows 3½ feet high. From Messrs. R. Veitch and Son, Exeter.

PEA DUKE OF CORNWALL.—The height of this is 5½ feet, the peas of true Marrow flavour. The haulm was entirely covered with pods at 18 inches from the soil. From Messrs. Toogood and Son, Southampton.

PEA NOBLEMAN.—A dwarf early variety, 2 feet to 3 feet, and of first-rate quality. The pods, produced freely in pairs, are above medium size. From Mr. Deal, seed grower, Kelvedon.

PEA WINIFRED.—Also a dwarf variety, 2 feet to 3 feet. The pods are large and the quality excellent. This also came from Mr. Deal.

PEA DALBY PROLIFIC.—A 3 feet to 4-feet high variety and of first-rate quality; pods deep green, well filled. It is a fine dry weather variety, as it was remarkably free and healthy. Messrs. Veitch, Ltd., Chelsea.

PEA ALDERMAN.—A very fine type of the Ne Plus Ultra, nearly 6 feet in height; pods of great length and the peas of fine colour and splendid quality. It is a good cropper.

Mr. Hudson, Gunnersbury House Gardens, sent a collection of Cherries, some ten varieties in all; splendid fruits they were, especially those of the Bigarreau type. Frogmore Bigarreau was a fine dish, the large pale yellow fruits, marbled with red, being much admired. Governor Wood, one

of the most reliable of all the white Cherries, was also excellent. Early Rivers and Black Circassian were splendid black varieties, the former being remarkable for its small stone and rich flesh (silver-gilt Knightian medal). Mr. Allan, Gunton Park Gardens, Norwich, sent his new Strawberry Lady Sutherland, both pot plants and lifted plants in baskets. This is an excellent variety, free cropper, of medium growth and good flavour. The same exhibitor sent a new Melon, Gunton Scarlet. This has received an award of merit; it is a small, but splendidly flavoured fruit. The Messrs. Laxton Bros., Bedford, sent a new Strawberry, Climax, a large, firm fruit of good appearance and flavour. It resulted from crossing Waterloo with Latest of All. The Messrs. Veitch, Chelsea, sent some excellent fruits of Strawberry Veitch's Perfection. A new Apple called Early Victoria, the result of crossing Lord Grosvenor and Kentish Codlin, the committee desired sent later. Messrs. W. Paul and Son, Waltham Cross, sent two varieties of little-known Apricots, splendid looking fruits, above the average size, the varieties being the Early Boulton and Domazan. A new Currant, a sport from Raby Castle, was sent by Mr. Smythe, Basing Park Gardens. Messrs. Laxton sent twelve varieties of Peas. Of the Peas the most noticeable were the new Duke of Rutland, a free grower with good colour; Gradus and Thomas Laxton. Peas Duke of York and Prince Edward were sent by Mr. T. Basham, Fair Vale, Newport, Mon., but the committee could not deal with these unless growths are sent or the varieties tried at Chiswick. A Pea named Nero with purple pods was sent from Burford Lodge Gardens by the President of the society. A novelty in the way of the Raspberry Blackberry, a cross between *Rubus fruticosus* and Raspberry Belle de Fontenay, was sent by Messrs. Veitch, Chelsea.

The conference was continued on Wednesday at Westminster Town Hall. In the absence of Sir Michael Foster, through illness, the chair was taken by Professor G. Henslow, and there was a good attendance. Mr. Herbert J. Webber, from the United States Department of Agriculture, gave an interesting lecture, with lantern demonstration, on the work of his department in plant hybridisation. The following papers were also read: "The Structure of certain New Hybrids (*Passiflora*, *Albica*, *Ribes*, *Begonia*, &c.)," with lantern demonstration, by Dr. J. H. Wilson, St. Andrews, N.B.; "Hybridisation viewed from the standpoint of Systematic Botany," by Mr. R. Allen Rolfe, Kew; "Hybrid Poppies," by M. Henry de Vilmorin, Verrières; "Self-Fertilisation of Plants," by M. Lemoine, Nancy; "Hybrid and Cross-bred Fruits," by Mr. Luther Burbank, Santa Rosa, California, U.S.A.; and Mr. T. Francis Rivers, Sawbridgeworth.

The festival dinner of the conference was held at the Whitehall Rooms on the same evening, Sir Trevor Lawrence presiding. Among others present were the Netherlands and Belgian Ministers, Lord Annesley, Sir Edward Fry, Lady Lawrence, the Master of the Rolls, Mr. W. Bateson, F.R.S., Mr. H. Webber, and the Rev. W. Wilks (secretary). The toast of "The Queen, Patron of the Society," having been honoured, the Rev. Professor Henslow proposed "Horticulture," and Mr. H. J. Webber, in responding, said he brought with him the friendly greeting of the United States Secretary of Agriculture. He added that he hoped to see the time when the originator of a new fruit or flower, in addition to the satisfaction he might feel in conferring a benefit on humanity, would receive the just and practical recompense to which he was entitled. Professor Hugo de Vries (Amsterdam University) and M. Henry de Vilmorin also responded. Mr. Bateson proposed the toast of "Hybridists," Mr. W. T. Swingle (Washington) responding. The Master of the Rolls gave "The Royal Horticultural Society," and referred to the early work of the society in sending out collectors into various parts of the world. The chairman, in reply, said it was owing to the work of Robert Fortune, who was

sent by the society into China, that the cultivation of the tea plant was introduced into India and Ceylon and an immense trade was thus almost wholly transferred from China. The society, which was founded in 1804, would soon have to consider how it was to celebrate its century. Of late years the society had been progressing by leaps and bounds, but it needed a hall in London and a new garden in place of the old garden at Chiswick. The Belgian Minister, responding for the visitors, said it was the common experience of the diplomatic body that British hospitality was unsurpassed throughout the world.

NOTES OF THE WEEK.

Rubus deliciosus in fruit.—Two large plants of *Rubus deliciosus* which I have had some twenty years, and which have never fruited before, have a quantity formed, and those facing south are quite ripe.—J. R. D., Reigate.

Lathræa squamaria.—In his garden at Rockville, Murrayfield, Midlothian, Mr. P. Neill-Fraser has this interesting parasite established and flowering freely on the roots of some trees. I saw it at the end of June, and one noted its erect spikes of streaked flowers with pleasure.—S. ARNOTT.

Rose White Maman Cochet.—The lovely Rose Maman Cochet is one of the best known and most admired of all Tea Roses, and this new-come, a pure white form with the same characteristic beauty, should not be less popular than its parent. It is a really delightful flower.

Saxifraga Hirculus major.—This yellow form is by no means seen every day, though quite a pleasing plant, the large golden yellow flowers having at first sight more the appearance of one of the Rock Roses or *Helianthemums*, a notion, however, quickly set aside by the foliage and habit generally. This pretty yellow Saxifrage delights in plenty of summer moisture.

Philadelphus microphyllus.—Referring to the paragraph *re* the above in last week's issue of THE GARDEN, it may interest some of your readers to know that I have this shrub growing in poor clay, measuring 4 feet 2 inches in height, 18 feet in circumference, and a mass of bloom.—E. HUTCHINSON, *The Elms, Darlington*.

Ferula tingitana.—This can scarcely be seen to advantage when small, but when with years it is fully developed, it is indeed a fine plant. Examples of it were noted recently in Messrs. Jackman's group at the Drill Hall, when information was forthcoming that a specimen some 10 feet high was a mass of golden-yellow in the nursery of the firm at Woking.

Nymphæa stellata.—Most Water Lilies flower in such a way that the flower-head alone just floats on the surface of the water, but in this lovely star-flowered kind the blossoms are borne aloft out of the water on stout stems to nearly 2 feet high. It is this strikingly distinct characteristic that renders it so valuable when cut. Mr. Hudson had a fine display of it at Chiswick on Tuesday last from the Gunnersbury House gardens.

Nicotiana sylvestris.—This is a handsome white Tobacco brought to the hybrid conference by Mr. James Hudson, gardener to Mr. Leopold de Rothschild, on Tuesday last. The plant has handsome leaves and an inflorescence—even when grown in pots, as in this instance—fully 4 feet high, which is terminated by a head of long tubular flowers that, while assuming a drooping attitude during the heat of the day, do not close as do those of many kinds, hence its greater value generally. From many points of view this is a valuable plant.

Campanula carpatica (Riverslea var.).—I herewith enclose my new *Campanula carpatica* Riverslea. The growth is stronger than in the type, but it is quite as free-flowering. The flat, Clematis-like flowers give the plant a very distinct effect indeed, being so very much larger than those of the other sorts in commerce.—M. PRICHARD, *Christchurch*.

*** A very handsome form, the flowers of a richer blue than we have ever seen. Some of the individual blooms measured fully 2 inches across.—Ed.

Hailstorm at Canterbury.—A fierce hailstorm swept over Canterbury on Saturday afternoon, and with it a thunder-storm of great violence. In many cases the lumps of ice, says a correspondent measured over an inch and a half in diameter. Fruit

and hop plantations, corn crops, and market garden produce have suffered greatly from the deluge of ice. Many of the fruit orchards have been nearly stripped of their crops, and the loss will be very severe. Owners of glass houses have also suffered severely, one nurseryman having over 1000 panes of glass broken, and the damage in this case alone is estimated at over £100.

Veronica paniculata.—Under its synonym of *V. amethystina* this Speedwell is grown at Shambellie, Dumfries, N.B., where it is very fine this season. It is an old species, introduced from South Europe more than 100 years ago. In the border it was very handsome with its rather loose racemes of bright blue flowers. If one could only get this colour into the spike of the plant referred to in another note as *V. sibirica*, a handsome and valuable plant would be secured.—S. A.

Rose Fellenberg.—This Rose is apt to be overlooked among the multitude of new introductions, but I may be pardoned for bringing its free growing properties and freedom of flowering before those interested in garden Roses. It is made good use of in beds in the garden of Colonel Blackett, of Arbigland, Dumfries, and a grand plant covering the potting shed was a fine sight in the beginning of July. As Mr. W. Houlston, the head gardener, says, the knife is never put to it, and the display it made was of the most brilliant description.—S. ARNOTT.

Incarvillea Delavayi in shade.—It may be of value to some of your readers to know that this handsome plant appears to flower quite freely in the shade. Last autumn I put out a few seedling plants in a small border with a north-east exposure which gets neither western nor south-eastern sunshine. The plants did not make growth early, and I was afraid that the cold snap we had in March had destroyed them. The first flower opened about the first of this month and the plants look quite healthy in their present position. They are not overhung by trees or other plants.—S. ARNOTT, *Carsethorn, Dumfries, N.B.*

Veronica sibirica.—Under this name there is grown in the garden of Captain Stewart, Shambellie, Dumfries, N.B., what appears to be a variety of *V. virginica*. I am aware that *V. sibirica* is considered synonymous with *V. virginica*, and that there is so much variation among the Veronicas that names count often for little. The plant to which I refer has unusually long spikes of flowers of a pale blue. The colour is not pronounced enough to be good, but the spike is finer than that of any *V. virginica* I have ever seen. The whorled leaves clearly mark it out as belonging to that species. It looks like a plant which would be worth seedling from to get a better colour.—S. ARNOTT.

Salvia carduacea.—This was one of the most remarkable plants in the group shown by Messrs. Jackman and Sons, Woking, at the last Drill Hall meeting. It was remarkable by reason of its peculiar growth, the rather square stems being terminated by several cushion-shaped whorls, soft, downy and flexible to the touch, and emitting, under cover of long, sharp spines, the soft, delicate lavender blossoms. In the construction of the flowers the margin of the lip is divided into numerous thread-like filaments of a silvery grey tone, which under a powerful lens are very beautiful, the rich orange anthers contrasting with the deep blue of the stigma. A peculiar, though not particularly pleasing, odour pervades this very curious plant, which is a perennial at Woking. It is not a flower or even a plant to attract from a distance, but at close quarters and under examination it is a most interesting subject.

Verbascum Hookeri and V. Lychnitis.—From Carton I have specimens of two Mulleins received under these names. Unfortunately, the box had been crushed in the post office, and the spikes are somewhat damaged. That named *Hookeri* is probably *Hookerianum*, a North African plant with bright yellow, purple-centred flowers. Compared with *V. nigrum* they are brighter both

on the exterior and interior of the petals. The stem-leaves are also more toothed and the stem branches freely. When closed, *V. Lychnitis*—a Caucasian species—looks as if the flowers would open out white, but they are of a kind of buff colour with an orange centre. At least this is what one can make out from the specimen sent in its present condition. The calyx is quite white, and it looks as if it would be rather a nice plant with its branching stems. Mr. Black speaks well of it, and one may accept his opinion of its merits.—S. ARNOTT.

Notes from a Cornish garden.—One or two effects in colour have been striking here lately, notably two small hedges of *Crimson Rambler* laden with bloom and completely surrounded by *Sidalcea candida*, also a clump of that useful old free-flowering Rose, *Anna Alexieff*, with *Anemone rivularis* round it. Again, *Prunella grandiflora* on the rockery contrasts well with *Liaaria tristis*. The *Physalis* have had their numbers enriched by *peruviana*, which is growing fast against the wall, and also near, *Franchetti* as a standard. *Orchis foliosa* seems to go back here. Next to it come *Primula imperialis* and *P. sikkimensis*, both well out. *Romneya Coulteri* opened its first flowers a fortnight ago. *Ipomaea rubro-cerulea* has the warmest spot in the garden, and has already gone 4 feet up a brick wall and is showing many flower-buds. The *Convolvulus* hed has certainly profited by the dry weather. *C. Cneorum* is flowering well and *C. althaeoides* is hard to keep within bounds, whilst *Convolvulus minor* gives us a sheet of blue and *C. lineatus* grows fast.—C. R.

PUBLIC GARDENS.

Public garden for Dalston.—The Albion Square (Dalston) public garden was opened yesterday afternoon by the Earl of Meath, the chairman of the Metropolitan Public Gardens Association. Mr. Reuben Clarke, chairman of the Open Spaces Committee of the Hackney Vestry, presided. Lord Meath said that Albion Square had existed as an eyesore to the neighbourhood for many years. The association and the local authority had made efforts since 1893 to secure the ground as an open space for the benefit of the public, but it was not until last year that the trustees of Lady de Saumarez, the owner, had consented to its being handed over for this purpose. The sum of £400, given by the City Parochial Trustees, had been spent on the land.

Open spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, the Earl of Meath presiding, it was announced that the Paragon and Portland Place Gardens, New Kent Road, which have been laid out by the association, had been opened to the public on June 28 by Lady Llangattock, and that Albion Square Garden, Dalston, would be opened by Lord Meath on Wednesday next. It was resolved to communicate with the Westminster Vestry and the Wandsworth Board of Works respecting certain vacant land suitable for recreation-ground purposes near the Vauxhall Bridge Road and at Earlfield. It was also agreed to take all possible steps to save Albert Square, Commercial Road, from the hands of the builder, and to lay out Marian Square, Hackney Road, and Granville Square, Clerkenwell, if their transfer to the local authorities for maintenance as public gardens could be secured. It was reported that the Court of Common Council had resolved to consider the desirability of taking over for maintenance the various public gardens which the association had laid out in the City, and that £2500 was still needed to complete the purchase money required for Dollis Hill. Lord Teynham, Lady Hobhouse, and Mr. Basil Holmes, the secretary, were appointed as representatives of the association to serve on the Thames Preservation League.

The weather in West Herts.—During the past week the weather has remained very warm

both during the daytime and at night. On the 11th the shade temperature rose to 82°, and during the previous night the exposed thermometer never fell lower than 59°, making this not only the warmest night as yet experienced this year, but also the warmest night recorded here at any time during the past fourteen years. The ground has also become very warm, the temperature at the present time exceeding the July average by 4° at 2 feet deep, and by as much as 6° at 1 foot deep. About a tenth of an inch of rain, or only sufficient to moisten the surface of the soil, fell during the night of the 10th.—E. M., *Berkhamsted*.

Red spider on Vines (R. H. J.).—Water freely and keep the atmosphere moist, syringing freely with clear rain water, also applying sulphur to the hot-water pipes. We found no other insect on the Vine leaves you sent.

Hardy non-British Ferns.—In your list of non-British Ferns hardy in Yorks, published last week, *Polystichum munifolium* should have been printed, and not *P. crinitum*, doubtless owing to my bad writing. I should have added *Gymnogramma triangularis*, a so-called Silver Fern.—R. MILNE-REDHEAD, *Holden Clough, Clitheroe*.

Apple tree unhealthy.—Would you let me know what this disease is? It is on a Peach Apple tree in my garden here.—W. W.

*** The leaves of your Apple are attacked by a fungus, but they were so shrivelled that I cannot name it. The best thing that you can do now is to pick off what you can of the diseased leaves and collect any that have fallen and burn them. As soon as any sign of the fungus appears next year, spray with Bordeaux mixture.—G. S. S.

Insects on Water Lilies.—I have in my garden a tank with cemented sides and bottom, about 30 feet by 15 feet or 18 feet, and say 3 feet 6 inches deep. The water is supplied from the town mains through a fountain, which as a rule plays by day and is turned off at night. A month or two ago some Water Lilies were planted in the tank, and for a time seemed to be doing well, when, however, something attacked the leaves and ate them almost as soon as they came up. At first it was attributed to some gold fish which swim about in the tank, but presently it was discovered to be the work of an insect, a lively, active sort of fellow, reddish brown in colour, about three-sixteenths of an inch or so in length and fairly slender. As I have not been able to learn anything of this pest from any of my friends, nor from the nursery where I procured the Lilies, I am venturing to send you a few specimens by parcel post, which I hope will arrive in good condition, and I shall be much indebted if you can tell me the name and origin of the creature and how to get rid of it.—W. H. N.

*** I have carefully examined the Water Lily leaves and the water in the bottle, and the only insects that I could find were the larvae of one of the gnats. I have no doubt that they are the insects you allude to, but I very much doubt if they have caused the injury to the leaves. I cannot say that they have not. As to destroying them, the only way that I can suggest is to pour a little paraffin oil on the surface of the water. This forms a very thin film, which prevents the larvae from being able to obtain air, as they have to do occasionally. It has been proposed to destroy mosquitoes in this manner by pouring oil on the tanks and pools in which their larvae live, and in some places it appears to have been successful.—G. S. S.

Names of plants.—M. Moody.—1, *Iris ochroleuca*; 2, *Rudbeckia speciosa*; 3, *Coronilla varia*.—Clifton.—A good form of *Cattleya Mendeli*.—H. Hallet.—1, *Pittosporum Buchananii*; 2, we cannot recognise; please send when in flower; 3, *Leptospermum scoparium*.—J. M.—1, *Cytisus capitatus*; 2, *Sempervivum arachnoideum* Lagerei; 3, *Sempervivum flagelliforme*; 4, *Syringa japonica*.—J. L.—1, *Iris foetidissima* variegata; 2, *Lycium europaeum*; 3, *Cytisus capitatus*.—H. Archer-Hind.—*Antirrhinum asarina*.—Joseph Milburn.—*Rosa rubrifolia*.—H. G. R.—*Cobaea scandens*.

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INDEX.

(Illustrations in Italics.)

Orchids:—	Lettuce, Cabbage 56	Week's Work:—	Societies:—	Lilium monadelphum 72
Anguloa Ruckeri sanguinea .. 53	Lettuce in hot, dry summers 56	Fruits under glass, work	Royal Gardeners' Orphan	Mazus Pumilio 71
Cattleya Eldorado 53	Lettuces in trenches 56	among 64	Fund 70	Oenothera, a double 71
Dendrobium Wardianum 53	Parsnip fly, the 56	Kitchen garden, work in the 64	Royal Horticultural 70	Peonies 72
Laelia purpurata Williamsi .. 54	Vegetables and drought .. 55	Orchard and Fruit:—	Notes of the Week:—	Pansy, Tufted, Archie Grant 71
Laelio - Cattleya Arnoldiana	Flower:—	Apples in Hereford 67	Acantholimon venustum .. 71	Pansy, Tufted, Magie 71
(Pickering Lodge var.) 54	Coreopsis grandiflora 58	Caterpillars, the plague of .. 68	Amantanthum muscatotoxicum 72	Pansy, Tufted, Walter B.
Masdevallia oethodes 53	Incarvillea grandiflora 59	Cherry Late Duke 67	Campánula cenisia 71	Child 71
Miltonia Regnelli 53	Kirkconcel, a note from .. 58	Fruit, flavour in 65	Campánula G. F. Wilson .. 71	Pansy, Tufted, White 71
Orchids, rare & beautiful .. 53	Larkspurs for cutting 58	Gooseberry Keepsake 65	Campánula grandis alba .. 72	Duchess 71
Paphiopus 53	Lilium testaceum 59	Gooseberry Telegraph 65	Campánula persicifolia .. 71	Pea, Sweet, Emily Eckford .. 71
Zygopetalum maxillare 54	Narcissus Bishop Mann .. 59	Grape Gros Guillaume 67	Centauria moschata alba .. 71	Trillium declinatum 71
Ferns:—	Narcissus Bishop Mann	Insects and Strawberries .. 66	Clarkia elegans Salmon Queen 71	Verbascum Lychnitis 71
Pteris, choice 54	(Siran's-neck var.) 59	Isotrichodes 67	Dendrobium fimbriatum ocu-	Veronica silicifolia 72
Rosess:—	Pea, Sweet, Butterfly 58	Peach Salway 67	latum 72	Obituary:—
Brier, Sweet, Anne of Geier-	Peas, Sweet, in hot weather 58	Pears, selected 66	Deutzia Lemoinei in S.W. of	Major Mason 72
stein 54	Peotstemous 49	Stock on graft, effects of the 68	Scotland 71	Miscellaneous:—
Rose Coquette Bordelaise .. 55	Salvia Teoreana 58	Strawberry President 66	Erigeron speciosus superbus 71	Baden-Baden, notes from .. 63
Rose Duke of York 55	Water Lilies 58	Strawberries, flavour in .. 68	Fuchsias in the greenhouse 71	Digitalis lanata 62
Rose Mme. Laurette Messimy 55	Wisley, Calochorti at 58	Strawberries in the open	Gaillardias 72	Locust tree, value of the .. 57
Roses at Woking 54	Garden Flora:—	ground 65	Geum Heldreichi 71	Open space, a new 72
Roses, Ayrshire and Ever-	Rhododendron multicolor Cur-	Wall breaks 65	Goedetias, self-sown 71	Perfumes from plants 59
green, for massing 55	tisi 62	Trees and Shrubs:—	Hemerocallis Pioneer 71	Pot-pourri or Rose jar 70
Roses on pillars and arches .. 55	Rhododendron multicolor Mrs.	Magnolia Lenne 68	Houstonia corulea 72	The Glen, Innerleithen 57
Kitchen:—	Heale 63	Magnolia Lenne 68	Iris, the Wedding 71	The Glen, Innerleithen, view at 57
Asparagus, cutting 56	Rhododendrons, Malayan, and	Periploca graeca 68	Lilium Burbanki 71	Topics, notes on current 69
Cauliflower grub, the 56	their hybrids 62	Law:—	Lilium Martagon album .. 71	Weather in W. Herts 72
		May v. Thyne 70		

ORCHIDS.

RARE & BEAUTIFUL ORCHIDS.

THERE is no doubt that in the past many Orchids have been admired and highly prized much more for their rarity than their beauty, and money value has had, I am afraid, in a few cases a far greater weight than beauty. Because a plant is a rare hybrid and possesses some distinct characteristic it has been much lauded whether it was superior to anything previously known in the same section or not. I for one—and I think most true Orchid lovers will join with me—am very pleased to see that of late a taste is springing up for kinds that are really beautiful as well as rare, and that our principal society is less lavish in its awards than formerly. At one of the Royal Horticultural Society's shows a well-known trade grower complained rather bitterly that a hybrid shown by his firm had not received a certificate, and when I ventured to disagree with him he came down with the very crushing intelligence that it was a hybrid, the result of a cross that had never been made before. The plant was absolutely inferior to either of its parents, and the committee very wisely, I think, passed it by. Too much has been made of raising hybrid Orchids, and the fictitious value placed upon some of them has brought Orchid lovers a name for delighting in unlovely plants with long names instead of beautiful and rare flowers. For this reason some people that should know better decry Orchids and let off a cheap kind of wit against men who have enriched our collections with some of the most lovely plants in Nature.

Take, for instance, the splendid series of hybrids raised by crossing the almost useless *Brassavola Digbyana* with the best of the labiate *Cattleyas*. A more beautiful flower than the first of these is inconceivable, and the later additions are almost equally meritorious. Look, again, at the innumerable *Cypripediums* that are improvements beyond question upon anything that has been imported. The men who have raised such plants are entitled to all the praise they are likely to get, and have conferred real benefits upon horticulture. They

are not to be named in the same breath with those who raise or purchase seedlings of reputed parentage and bring them to exhibitions with the idea of getting a certificate which will enhance their monetary value. To keep their good name, Orchid hybridists must make up their mind to disappointments the same as raisers of other flowers, and not think that every cross they make is worthy of perpetuation. It is hard lines to have to throw away a plant after years of patient waiting and care, but it is better to do so than to bring the cult into disfavour or even ridicule. If the plant is so far worthy, by all means keep it and grow it for cutting if suitable or for home decoration, but do not endeavour to force it upon a public taste quite satiated with such, not to use a stronger term.

To a more limited extent the same principle obtains regarding varieties of well-known species. There are the albino forms of the labiate and other *Cattleyas*, each and all of which are most chaste and lovely Orchids, and no one could fall out with the high regard in which they are held. Then among the *Dendrobiums* there are many most exquisite varieties that no one, unless absolutely devoid of the sense of beauty in form and colouring, could fail to admire, and the same is true of fine colour varieties in the *Cattleyas* referred to above. What should be avoided is raising on too high a pedestal such things as *Dendrobium nobile Cooksonianum* and *Laelia purpurata Ashworthiana*, in which the colouring, though unique, does not add to the beauty and, therefore, the intrinsic worth of the plant.

A GROWER.

Anguloa Ruckeri sanguinea.—The flowers of this variety are among the brightest and best of the *Anguloas*, and it is a beautiful plant that anyone may add to his collection with advantage. As distinct from the type, the whole of the interior of the flower is a deep red, and when a number of flowers are open the effect is very good. I have noticed more of the decaying of the flowers of *Anguloas* this season than I have ever seen before, and I cannot help thinking that some of this is due to allowing the plants too much heat. A little more than the coolest house affords may do no harm if the flowers are wanted by any

special date, but beyond a few degrees it is not wise to go.

Dendrobium Wardianum.—It is strange how suddenly plants of this species collapse, sometimes without apparent cause. It is over seven years since I have purchased any newly-imported plants, and this is longer than they usually thrive under cultivation. This spring when flowering I noticed one of the plants throw a lot of badly-formed blossoms, and since then it has made nothing but small, worthless growths, which will never be strong enough to flower, and the plant is, of course, useless. Yet last season the plant apparently grew well and was well ripened, but all was not right as evinced by the poor flowers.

Masdevallia oethodes.—I noted a fine plant of this singular little species recently with a number of its tiny flowers so prettily set upon the scapes, the sepals not very showy in colour, but forming a peculiar boat-shaped cavity peculiar to this section. This and a few allied species are, perhaps, more constantly in flower than any other Orchid, and it is nothing unusual for the spikes that rise in early autumn to go on producing the little flowers all through the winter and spring months. The plant is of the easiest culture, thriving in a cool house with the other members of the genus, but is not showy enough to be generally cultivated.—B. S.

Miltonia Regnelli.—Flowers of this pretty species come from a correspondent. They are large and handsome, showing well the pretty bright rose suffusion that is a marked characteristic of the best forms of this species. In growing these Brazilian *Miltonias* many people are apt to give them too much heat at certain times in the year, particularly in summer and early autumn, when for very good cultural reasons the *Cattleya* house in which they are grown is allowed to run up a little higher than usual. Where a proper intermediate house exists there are many plants that may be accommodated in it all the year round, and this fine *Miltonia* is one of them. Regular temperatures and regular supplies of moisture both at the root and in the atmosphere will ensure healthy plants, other conditions being favourable. A thin compost of peat fibre and Moss suits it well.

Cattleya Eldorado.—This species is not so strong in growth as the majority of the labiate *Cattleyas*, nor has it such large flowers, but it blooms at a very useful time, and is therefore

well worth growing. It is easily distinguished by its tubular lip and flowers of less substance, and though keeping fairly well to its seasons of growth and rest, it does not always do so. One plant here almost always flowers in late autumn and is a very good form. There are many varieties of it, including several that have received names and a large number of others. It thrives well with the usual *Cattleya* treatment, and, like *C. gigas* and one or two others, likes best a position not far from the roof glass in baskets or pans. The compost must be free and open, consisting of rough peat, Moss, and charcoal over good drainage. It is a native of the Rio Negro district, and for a time after its introduction in 1866 was rare. Frequent importations have arrived since.

Lælia purpurata Williamsi.—This superb variety is now in flower, and it is among the finest of Orchids now blooming, the rich crimson-purple on the lip being a magnificent bit of floral colouring. The plant is of exceptionally strong growth and very free-flowering. Like all free-rooting subjects, this plant when healthy must be given ample room in the pots, and it is not well to leave it to get very badly pot-bound before giving fresh compost. I have a large plant of a good variety that, like the above, usually flowers after the typical *L. purpurata* is over, and being a little chary of disturbing it, I let it go too long without repotting a few years since, in consequence of which it is now only just recovering the check given when disturbed. Had the plant not been allowed to go back, but been given new material when still healthy, all would have been well. As it is it has taken several seasons to recover. In the large pots necessary for such specimens it is imperative that plenty of good charcoal or other hard porous material be placed with the peat and Moss, or a closeness will ensue that is fatal to active rooting.

Zygopetalum maxillare.—Many hundreds of plants of this have been imported, only to flower respectably for a year or two and then to dwindle away, and the likeliest plants to do are those that are sent home on the native Tree Fern stems, a practice not so common, perhaps, as formerly. I remember receiving some plants of it about eleven years ago that were nearly all attached to this material, and, dried as they were, most of them plumped up and came away all right, but all those that had been torn off died. The plant does not seem able to store sufficient nutriment in its small pseudo-bulbs to enable it to withstand the rough treatment it is exposed to as well as its stronger growing brethren. When under cultivation, if the stems referred to cannot be obtained, then a thin make up of well-drained compost is the next best substitute. The rhizomes extend a good deal laterally, and room must be found for them, or weakness will ensue. Roots outside a pot or basket are always in danger from insects, besides which they are more liable to be dried and to suffer from external injury. The material ought to be of the most lasting description, not very much peat, but plenty of Moss being used, as this, by its decay, does not get into such a solid, close mass as the peat, and forms, perhaps, some little food for Orchid roots. *Z. maxillare* is a very old garden Orchid, having been introduced by Mr. Warne through the then well-known firm of Loddiges very early in the present century.

NOTES AND QUESTIONS.—ORCHIDS.

Lælio-Cattleya Arnoldiana (Pickering Lodge var.).—This is an exceedingly dark form of this hybrid. It is derived from the intercrossing of *Lælia purpurata* and *Cattleya Warscewiczii* (*zigas*). The sepals and petals are of a deep rose-lilac tint. The whole of the front lobe of the lip is rich crimson-purple, heavily veined with a darker shade of crimson, the side lobes rose-purple, shading to yellow at the base, where there are a few lines and a slight suffusion of purple through the throat.—C.

Paphinias.—In my note on "Orchid roots" at p. 22 I have mentioned *Promeneas* as Orchids

with very sensitive roots, but it was *Paphinias* I should have written. These singularly pretty Orchids, though related to the other genus, are more impatient than they of checks, whether these are caused by closeness at the roots or in any other particular, but I know of very few kinds that are so easily injured by the former mischance. To do them well, insects must be kept in check by constant atmospheric moisture, and everything about them must be very clean and sweet.—H. R.

FERNS.

CHOICE PTERISES.

PTERIS SCABERULA.—This beautiful and distinct *Pteris* is difficult to deal with. Where it once gets established and finds genial conditions it grows freely, and the spreading rhizomes soon cover a large space. The greatest difficulty is when it is necessary to disturb the roots, especially when dividing plants to increase the stock. As it rarely produces spores, it is necessary to propagate by dividing, though when it does prove fertile the spores germinate freely. I have raised seedlings on several occasions. The first time I found fertile fronds was nearly thirty years ago, and I still have some dried specimens collected then. Some few years ago I saw a very large specimen which had a number of fertile fronds. The plant having become too large it was divided, but this proved fatal. I believe the whole of the divisions died. To divide successfully, young plants must be taken before the pots have become too full of roots, or, if grown in a shallow pan, it gives the rhizomes room to spread, and they may be taken off with roots and soil. Treated thus and grown in a cool, rather shady position where the atmosphere is fairly moist, it is one of the most beautiful Ferns grown. It should be potted in good fibrous loam, and good drainage should be given.

P. VICTORIAE.—This is another very desirable Fern which requires careful treatment, and when raised from spores it is much inclined to vary in habit. While some of the seedlings will, under good treatment, grow freely enough, there are sure to be some which have a tendency to be dwarf, congested, refusing to grow freely and make good plants. It is therefore necessary to select a good free-growing form for saving the spores from, and then see that the seedlings are grown on freely from the start without receiving any check. I have found the spores germinate freely, and soon throw up their first fronds. They should be pricked off as early as possible, and when ready to pot, a good open compost with plenty of drainage is advantageous. Many of these more slender-growing Ferns are often ruined through using a fine compost from which the best elements have been removed with the sieve. Fine soil and overwatering are common errors in Fern culture, and those of less natural vigour almost invariably suffer. The above *Pteris* succeeds best in a stove temperature, though it will do fairly well under cooler treatment. When well grown the very distinct white variegation gives a good contrast among other Ferns, and also renders it a desirable variety for decoration. Since its introduction several distinct varieties have occurred, *Regina* being one of the best. This is a more vigorous grower. There is also a crested form of this which is equally free, but these do not come so freely from spores as the parent. In Mr. Goodliff's nursery, Worthing, there are plants of these two varieties with fronds upwards of 2 feet 6 inches in height from top of pots, the plain form giving one the idea of a variegated *P. serrulata*. *P. tremula* variegata also came from *P. Victoriae*, and though very pretty in a young state, it does not keep the variegation so well and gets straggling with age; further, it is difficult to propagate either from spores or divisions.

P. TRICOLOR is another beautiful Fern rarely seen in really good condition, being of slow growth and much liable to damage if wet settles

on the fronds. It should be grown in an elevated position and well exposed to the light, but some shade is necessary in very hot sunshine. In potting, the crown of the plant should be kept well down. The stem lengthens with each frond, and roots are produced from the upper portion as it advances, and these perish if not close enough to take hold of the soil, which is often the cause of this beautiful Fern being seen in a sickly condition.

P. NEMORALIS VARIEGATA.—Although not so delicate as the last named, some care is necessary to have it in good condition. When grown freely in a suitable position the young fronds have a beautiful rosy tint which distinguishes them from those of *argyrea*, which under any conditions does not give any colour except green and white.

P. ASPERICAULIS, or *rubraulis*, as it is sometimes called, has dark bronzy brown tinted fronds, which give a distinct shade in a collection of Ferns.

A. HEMSLEY.

ROSE GARDEN.

ROSE MME. LAURETTE MESSIMY.

OF all Roses I should recommend for groups it cannot be gainsaid that the variety *Mme. Laurette Messimy* gives the greatest satisfaction, being of vigorous growth, with an abundant and uninterrupted bloom from May till the frosts come. The colour of the flower is a tawny china rose, increasing in depth of tone in deep and fertile soils in northern climates; its leaf a blue-purple, elegant in form, in which it resembles a Tea Rose. In its general aspect it is vigorous, elegant, bushy, and quite hardy. In many countries, like Switzerland, Germany, and especially England, this variety is the object of peculiar care. It is fashionable; in all Rose gardens it has its allotted place; it is much cultivated in groups and masses; isolated, it often reaches gigantic proportions in rich deep soils and situations favourable to it. In a certain Normandy estate a Rose bush of this splendid variety planted in conditions very favourable to it reached in the space of two years a height of 6 feet 6½ inches and a circumference of more than 13 feet 1½ inches about 4 feet from the ground; it formed a round bushy shrub from the base upward. Its vigour is such that on May 20 last its owner counted more than 450 buds on the point of opening and a multitude of others to follow. Comment is superfluous. Many another analogous fact could be cited in proof of the merits of this Rose. The credit of obtaining this remarkable Rose is due to M. Guillot, of Lyons, who brought it out in 1887. It is the result of crossing the *Bengal Rival* de Pestum and the Tea Rose *Mme. Falcot*. A most happy gain it is, which has endowed Rose culture with an extraordinary variety by creating a veritable type which has given us other varieties having the same qualities of vigour and freedom of blooming in different colours.—P. GUILLOT, in *Les Roses*.

Sweet Brier Anne of Geierstein.—Although one does not profess to be a Rose expert, when one sees a good many gardens it is possible to select some of the most valuable without special knowledge of the host of Roses in cultivation. I am thus pleased to see that your correspondent "P." gives this variety so high a place among the sixteen raised by Lord Penzance. It is at present remarkably beautiful in my garden, and a gardener of extensive experience was greatly struck with its colouring the other day. Its vigorous growth is also remarked upon by your contributor. It is growing on a pillar here, and in this light, dry soil it is doing very well. In some respects it is finer than *Lady Penzance*, but

then the colour of the latter is, as "P." says, perfectly unique. In some soils this colour is, however, not well brought out, and a fine bush I saw the other day was hardly recognisable as Lady Penzance, although careful observation showed that it was correctly named.—S. ARNOTT.

Rose Duke of York (China).—The intense heat of the last few days has produced a wonderful effect upon this most uncommon Rose. It is at all times very variable, some of the flowers being almost white with a pretty carmine edging like a high tinted *Homère*, others nearly a pure light pink self until the flower expands, then the centre is flamed with rich rosy-red. This latter colour is now most intense; in some flowers it nearly approaches to blood-red. When this is so the under part of the petals, which is usually very pale, produces a surprisingly beautiful combination. Under glass and also outdoors many of the expanded flowers have the two outer rows of petals nearly white, the centre ones, which are irregularly placed, glowing with rosy-crimson. Duke of York is a good kind for the garden, succeeding well either as a bush or standard. It has a good vigorous constitution, with an elegant yet erect habit of growth.

Rose Coquette Bordelaise.—Rarely has a Rose appeared with a more distinct character than the above beautiful kind. To judge from the blossoms exhibited recently at the Chiswick conference by Messrs. W. Paul and Son, of Waltham Cross, this variety belongs to the Hybrid Perpetual class—in fact it is said to be a sport or seedling of Paul Neyron. The growth is certainly in the style of the latter Rose, but the form of flower is totally distinct, being when expanded almost flat, which enables the markings upon each petal to be distinctly visible, and appears like a huge *Carnation*. The ground colour is a pure pink, each petal being heavily flaked and blotched with white and sometimes slightly scalloped. This Rose will certainly become a more general favourite than *Pride of Reigate*, for somehow the latter never inspired one with any great liking for it. It is novel, but the markings are very irregular and the combination of colours not at all happy, whereas in *Coquette Bordelaise* the white blotches and lively pink ground colour are most attractive. As a garden Rose I should say it will gain much favour by the Rose-growing public, who are always ready to welcome really distinct novelties.—P.

Roses on pillars and arches.—It would be very interesting and useful if anyone who has good varieties of *Polyantha* or other Roses that will cover long lengths of trellis of any kind would give their names and short description, for out of the large number recommended for the purpose it is surprising how few quite fill the blank. I have *Crimson Rambler* 18 feet long, but, like many others, the bottom parts get very thick before the upper portion is furnished. It is the same with the *Dijon Teas*, as *Mme. Berard*, *Bouquet d'Or*, and others, also most of the single *Briers*. What is wanted is something that makes good shoots from the upper parts like the *Monthly Roses*, *Carmine Pillar*, and one or two more. There are several climbing forms of well-known Roses, such as *Captain Christy*, *Niphetos*, *Souvenir de la Malmaison*, and others, that make fine growths, but being almost strictly deciduous are hardly suitable, as the trellises and arches show too plainly in winter. I had that to keep Roses in health and vigour in such positions a great deal of feeding is necessary, much more than for trees growing in beds or borders. A rather pretty combination is *Crimson Rambler* Rose and *Clematis montana* on adjacent pillars and allowed to grow together, the former making a fine succession to the *Clematis*.—H. R.

Ayrshire and Evergreen Roses for massing.—Odd pieces of ground might be very usefully filled with some of the above Roses so that they can run about in wild confusion. They are a most useful race, growing and flowering where other kinds refuse to exist. If plants are procured upon their own roots and set out about 4 feet apart, in three years a delightful effect

would be produced. The long, trailing growths are then smothered with blossom, and yet there is an entire absence of formality owing to the new shoots breaking up from the centre of the plants. Particularly beautiful grown in this way is *Myri-anthes renoncle*, its pretty blush-pink flowers and elegant buds showing to great advantage. Another fine kind is *Leopoldine d'Orleans*, white, with red buds. Indeed, the whole of the collection would be sure to thrive. Even such a rampant grower as *The Garland*, a charming hybrid Musk, is now blooming freely grown in the manner described, and *Crimson Rambler* would be glorious. A certain amount of pruning is necessary. The growths should be shortened each year to about 3 feet or 4 feet from the base. Even this would not be required if the plants were set out further apart, because the growths are bound to blossom from almost every eye when they are allowed to grow in this creeping manner for a year or two. Overcrowding must, of course, be avoided, or the flowers will not be seen. This can be easily accomplished by entirely removing now and then some of the older growths.—P.

ROSES AT WOKING.

THE hot, dry, sandy nature of the soil in this neighbourhood is not conducive to the lasting powers of Rose blooms, and it is difficult to grow the flowers up to a good exhibition standard in a dry season. Nevertheless, this is a perfect home for Roses in the garden. In few localities can one see such a display of Roses or so early. During June one noted many splendid examples of W. A. Richardson, and the deep apricot tint in the flowers was especially noticeable. *Crimson Rambler* was seen in fine bloom, many trees being of large dimensions. Another Rose that does well is *Viscountess Folkestone*. Although this is not generally a good show Rose, the huge blossoms of flesh colour have a noble appearance on the plant. *Gustave Regis*, light yellow, so perfect in bud, has a splendid effect when fully open, even if not so double as many kinds. Mrs. John Laing is everywhere good, thus proving it a most desirable Rose for light soils. The most satisfactory light Rose, perhaps, has been *Mme. G. Luizet*. It was noted in perfect form about the middle of June. Roses generally appeared backward, but the hot sun brought them on with a rush, and the first bloom was quickly over. Here, however, new growth is readily formed, and we get an almost continued display of flowers. *Ulrich Brunner* is a sort that does well, except that it is only on strong plants that one sees a perfectly double flower. *La France* is always good, but this year is not so fine as last. *Suzanne Marie Rodocanachi* gives fine blooms, although somewhat thin. The greatest difficulty is with the dark-coloured kinds. *Prince Camille de Rohan*, *Xavier Olibo*, *Louis van Houtte*, and *Victor Hugo* are all unsatisfactory, and the lighter crimsons, A. K. Williams, *Alfred Colomb*, *Marie Baumann*, are but little better. The few dark Roses that do fairly well are *Duke of Edinburgh*, *Crown Prince*, *Prince Arthur*, and *Fisher Holmes*. General *Jacqueminot* grows as freely as any, but the buds open fast and are quickly over. *Captain Hayward* and *Thomas Mills* are other bright-coloured sorts whose beauty is fleeting. *Gustave Piganeau* and *Earl of Dufferin* do not grow well, and *Charles Lefebvre* is only a fair success. Her Majesty is a Rose suited to our soils, and Mrs. Sharman Crawford does well also, but the blooms this year are not so good as last. *Baroness Rothschild* and *Merveille de Lyon*, two kinds of similar growth, make fine trees and blossom well. *Margaret Dickson* and *Marchioness of Londonderry* have grown well, but do not flower freely. *Comte de Raimbaud*, a Rose not unlike *Chas. Lefebvre*, is a dark one that will be tried by planting more of it. It is an old, but somewhat neglected variety.

Except in the nurseries on newly-budded plants, Hybrid Perpetuals generally do not produce ideal show blooms in this locality. The Hybrid Teas and Tea-scented Roses, however,

grow much better. *Caroline Testout*, salmon-pink, surpasses *La France* in beauty and abundance of bloom. *Kaiserin Augusta Victoria* is a favourite both under glass and in the open. *Mme. Abel Chatenay*, rather a new Rose of a salmon-pink shade, was seen in more than one garden, but is not very well known. It is likely to be valuable as a garden Rose. *Marquise Litta* is one of the successes of the year. It bears large carmine-coloured blooms and has exceptional petals. This is handsome on the tree. Mrs. W. J. Grant does well. Another Rose, new to me, noted in Woking is *Souvenir de President Carnot*. It bears full blooms of a pretty pointed shape, the colour being white, with a pink tinge. *Anna Ollivier* is among the best of the Tea Roses. It grows freely and the flowers are very distinct. *Maman Cochet* does exceedingly well. Its salmon-rose blooms are of perfect form. Grown on strong soil they are apt to split, and therefore less valued generally. I saw the white *Maman Cochet* in bloom recently. It is hardly pure, as its outer petals have a pink tinge, but it is a decided acquisition for all that, and is as distinct from the parent as is *The Bride* from *Catherine Mermet*. What a splendid family we are getting from the last-named!—*Bridesmaid*, *Muriel Grahame* and *The Bride*, all of faultless and similar form, but different in shades of colour. These do capitally here. *Marie van Houtte* comes with blooms more pink in tint than one meets with elsewhere. *Hon. Edith Gifford* grows well and blossoms freely. The somewhat tender sorts, *Cleopatra*, *Comtesse de Nadaillac*, *Mme. Cusin*, and *Mme. de Watteville*, do not make nice plants. I think they should be tried on low standards. *Medea* does fairly well; so, too, does *Souvenir d'Elise Vardon*. *Rubens* is a good old Rose, but does not come over double. *Souvenir d'un Ami* and the sport, *Souvenir de S. A. Prince*, grow well and flower, but the blooms are comparatively small.

Is *Gloire de Dijon* Rose wearing out? Whether it is that W. A. Richardson does so well in the neighbourhood and the former suffers in consequence or not, it is not happy in many cases, and one rarely sees it in that rampant style of years ago. *Laurette Messimy* is a charming Rose of the China class. It blooms the whole season and is quite charming in colour, satiny rose. *L'Idéal* is represented by some fine specimens. These will by-and-by run W. A. Richardson close in attractiveness, the shades of colour in the blossoms being unique. H. S.

KITCHEN GARDEN.

VEGETABLES AND DROUGHT.

In many gardens the soil is light, resting on gravel, and in a dry season the culture of vegetables from June to September is difficult. I may be told watering will remedy the evil, but it is a poor remedy if used alone. It is almost labour in vain in the case of certain crops sown very thickly, as unless done daily, it is useless. For several seasons past we have had long periods of drought, and it is a difficult matter in light soils to maintain a healthy growth. It is surprising what may be done by mulching sufficiently early between the rows of growing crops, also by sowing thinly. A strong plant is an important item in such seasons. I have referred to mulching and advised early attention to crops perfecting their growth, such as Peas, French Beans, Cauliflowers, salads, and similar crops. During the latter part of June I have after mulching watered daily for quite a fortnight, and have already reaped great benefit by the same, as the plants, given a thorough watering once a week, will pull through and growth will be clean and strong. Few vegetables collapse sooner than Peas in dry, hot soils. I find that, to get them after June is over, mulching is a necessity.

Few materials are available for mulching, and one is obliged to use those at hand. There can be no doubt as to the value of cow manure for light soils. This is much better than horse manure, but, as previously stated, it is not always obtainable. I use spent Mushroom manure largely. This is obtained at small cost and is most valuable as a mulch, as it retains moisture so well if used freely. As regards feeding on a light porous soil, it is not the best, but one must think of the present crop and act accordingly. It would be far better in the winter months to cart some heavier material on to the land in the way of soil of a clayey nature, but this is not practicable in many cases. In mulching with the material advised, it is well to use sufficient down the side of the rows, so that when moisture is given it is retained. Of late years I have found the strong growing Peas of the Stratagem type the best dry weather varieties. These only growing 3 feet, often less in dry seasons, may be sown much closer than tall varieties. I find it well to mulch the whole space between the rows, and if this is done it is surprising how the plants thrive. The mulching is necessary just as the podding commences, and in watering a thorough soaking is given. In the case of salads, I fill up the space between the plants. The same treatment is carried out with Cauliflowers, French and runner Beans, or other shallow rooting crops. Long litter will prevent loss by drought. I admit strawy litter does not add to appearance, and if it can be obtained with the long straw removed so much the better. On heavy land using the hoe freely in dry weather is of great advantage. On such land light materials are beneficial. Here such aids as leaf-soil and burnt refuse will be found serviceable.

G. WYTHES.

CUTTING ASPARAGUS.

SEVERAL notes on this subject have lately appeared in THE GARDEN. As to which is right, cutting large and small grass alike, or leaving the weakly growths to develop, there appears to be a divided opinion. It has always been my practice to leave the weak grass, and I think it is beneficial, especially where the soil is not the best for Asparagus culture, as it certainly increases root action and strengthens the plants generally. I have lived with three or four very good Asparagus growers, and each of them, if I remember rightly, allowed all the thin, weak grass to remain. A few days ago I was speaking to a very successful grower who is strongly in favour of leaving all small growths. These, he maintained, formed stout eyes at the base, these producing strong growths the following season. Their remaining also increases root-action, and the whole stool is strengthened. The grower in question takes more trouble with his seedlings than most gardeners. The permanent beds are not planted at random, the young plants being first proved in nursery beds. The seed is sown not too thickly in a not too hot position, the young plants being kept well moistened while growing. Mulching is serviceable in dry seasons, spent Mushroom manure answering very well. The second spring the young plants are transferred to a nursery bed and allowed fair room to develop. When in berry the plants are marked, those only with large berries being selected. Planting into the permanent beds is performed the following season. This grower thinks that if male plants only were planted finer grass would be produced. Of course, one would require to sow a large quantity of seed to be able to select all male plants. Male plants, he contended, having no seed to support grew much higher and stronger and formed stouter eyes for producing the following year.

The same grower described the behaviour of different varieties of Asparagus in the garden under his charge. There were three sorts, one of

which he found on the premises when he took charge many years ago; the two others were Conover's Colossal and Argenteuil. The first named, though treated exactly similarly to the rest, produced inferior grass, though in greater quantity. Conover's Colossal is finer, and Argenteuil finest of all. The last is my friend's favourite strain. I may add he is an advocate for blanched produce, and states that if when away from home he eats ordinary green stems they are never enjoyed like the blanched heads of his own garden. I have grown the Argenteuil variety myself, and consider it fine in every way. Anyone planting it on fairly good ground and dealing patiently with it for the first three seasons will, all other conditions being equal, be pleased with it.

NORWICH.

LETTUCE IN DRY, HOT SUMMERS.

Or Lettuce in certain seasons it is difficult to keep up regular supplies. From years of close observation I have found that the Lettuces with deep coloured leaves are most reliable. A great deal depends upon the soil and culture, but in hot, dry seasons a great deal also depends upon variety. Doubtless many growers have found that the autumn varieties, if they can be called such, are more reliable for summer cropping in dry seasons than the quicker growers. I allude to such kinds as the Black-seeded Cos, Champion Brown and Bath Cos, Hammersmith Hardy Green, Lee's Immense and others. These sown in May or June are all good for the season noted, and given a cool root-run are most useful for July and August supplies. To sow at short intervals on a dry, hot soil through July and August will end in failure. The seeds with sufficient moisture germinate freely, but in a thick seed-bed so quickly run to leaf that planting out is impossible, as if the plants are pricked out very small the sun takes all life out of them, and if allowed to get any size they are weakly, being drawn and run to seed instead of hearting. There is no better plan than sowing very thinly in rows and on a north or cool border for the June or early July sowings if this plan can be adopted. The chief work is thinning out sufficiently early to prevent crowding. Many may think this mode of culture waste of seed, but it is not, as in sowing one may drop a little seed at say intervals of 9 inches to 12 inches apart, and thinning is soon done. I find it best to draw drills with a flat bottom not less than 6 inches wide. These drawn 15 inches apart give nice space and the drills allow of watering. Another plan, and one that rarely fails, is to draw a single drill at the foot of a north wall and sow very thinly. Here I have even got good results by transplanting, as the soil is cool, but this is not always reliable in hot summers. It is best to rely on sowing and thinning out. A poor thin soil is so soon dried up that those who can use cow manure for salads in such soil and in liberal quantities will find it invaluable. Much may be done by mulching between the rows with spent Mushroom manure, or even short litter; in fact anything that retains moisture will be of great value. The best summer Lettuce in a light soil is Continuity, a variety raised in the eastern counties and specially good for summer crops. This is a dark or red coloured form of Cabbage Lettuce, and it remains fit for use a longer time than any other variety I have grown, as even when full grown and in dry hot weather the plant remains solid for some time. I have heard objections made to the colour of these plants and others of similar type, but the quality is good and that is important, and the colour when the outside leaves are removed is rather pleasing than otherwise, as the heart is a beautiful pale pink and very firm. Another variety and but little behind Continuity is Marvel, also a Cabbage variety. This kind has red edges, the heart being of a pale golden colour. It is a splendid variety for dry, hot soils. Sown with Continuity it is earlier, but keeps longer. A variety named Standwell is excellent. This will suit those who object to the deeper coloured forms, and the Victoria, an

old but good kind, a black-seeded variety, is excellent for the summer and equally good in winter. For years I grew Kingsholm Cos, a splendid form, but of late years have grown Intermediate, a most distinct form, smaller than the ordinary Cos, but not unlike the Bath Cos, and invaluable for light soils, as it remains good so long and takes up little room. This variety can be grown closer together than the others named. There are several kinds of black-seeded or Bath Cos, some much better than others, but few are superior to the Northern King Cos, a variety well worth growing for late summer supplies.

G. WYTHES.

Cabbage Lettuce.—Having tried most of the varieties of Cabbage Lettuce catalogued, owing to the fact that this type is much more in demand with me than the Cos, I should like to add a note to the correspondence on page 402. My selection would be Golden Queen, Perfect Gem and Continuity. The first named is the quickest variety either for in or outdoor work. The first outdoor crop should, however, be planted on a narrow south border so that a little protection can be given in case of frost or very cold winds. Sown at the same time as Perfect Gem and grown under exactly similar conditions, it is ready for cutting a few or ten days before the other variety. It is not a good mid or late summer Lettuce, running very quickly if the weather prove hot and dry. I have, however, grown it all through the summer under opposite conditions, and endeavour to do so if possible, as it is a great favourite. Perfect Gem stands well and is a very useful variety. On page 402 "J. R." suggests that "A. W." has a spurious or inferior variety of Golden Queen. Is "J. R." equally unfortunate in the matter of Continuity? This with me is the most reliable for the summer months, as it stands drought well, does not run away quickly, and the heads attain a large size. Being a strong grower, it wants deep tilth and plenty of manure. I get occasionally in each batch plants of a sort that correspond with the description given by "J. R.," growth being coarse and ragged, with an Endive-like outer edge of leaf. This is a long time turning in and the heart is small when compared with the huge outer leaves.—E. BURRELL.

NOTES AND QUESTIONS.—KITCHEN.

The Cauliflower grub.—This is the larva of a small fly very like the common house fly. It especially attacks Cauliflowers planted in recently manured ground. Any preparation of carbolic acid dusted round the Cauliflowers when planted will prevent an attack.—G. M.

Lettuces in trenches.—Where many hundreds of Lettuces are needed transplanting is almost compulsory, and then should the weather be hot and dry difficulty is often experienced in inducing the plants to start away freely, or growth is such that wholesale premature running to seed occurs. When the demand is limited means are more easily practised for the prevention of collapse or unsatisfactory growth. Shallow trenches capable of holding a few score of plants are easily thrown out, and in these the plants can be easily watered and temporary shade afforded by placing a few evergreen branches on either side of the trench. The labour of this may at first sight seem great, but in shallow, porous soils it is a gain in the end.—C.

The Parsnip fly.—I take it that this pest is synonymous with the Celery fly, though, fortunately, the damage caused by the grub among Parsnips is by no means so great as in the case of Celery. This season, however, I have noticed several instances where Parsnips have suffered severely through it, but they were all in one locality where the soil is very dry and close to the chalk. Whenever Parsnips are badly attacked it has a serious effect on the crop, for the mutilation of the leaves causes a stunted growth and the roots suffer in consequence. Strong, healthy plants are rarely affected, and if sown at the end of February or early in March they become so vigorous that by the time the fly is on the wing it shuns them for leaves less leathery and consequently more toothsome.—H. H.

THE GLEN, INNERLEITHEN.

THIS charming seat of Sir Charles Tennant, Bart., is situated on Quair Water. It was built in 1852, enlarged in 1873, and is said to have cost, with the surrounding grounds, some £50,000. The style of architecture is the old Scotch baronial, and Mr. Bryce, the architect, has been known to quote The Glen as his best illustration of this style. Notwithstanding its name, there is but little level ground to be found in the gardens at The Glen; in fact, one of the chief charms of the place is the rolling character of the site. This prevails throughout

of the Irish Yew some 30 feet through; some venerable Scotch Firs and other fine trees, including a Beech 14 feet in circumference at 4 feet from the ground. The tree has its branches chained together.

It is emphatically a picturesque rather than a fertile garden, and it adds greatly to the credit of the cultural triumphs achieved that they have mostly been won in the teeth of very great difficulties. The soil is hungry as well as thin and poor, only an inch or two thick in many places over the barren whinstone which forms the base of the stratum. In some parts the rock,

collections of herbaceous plants in various directions were prepared to make good the supply of flowers through the season. The entire domain is emphatically a garden beautiful, and each step reveals new pleasures.

The fruit and kitchen gardens, old and new, that cover some 5 acres, are on different levels. Notwithstanding the height and free exposure, however, the fruit trees and bushes and all the crops in the open were among the very best I had seen. The crops were abnormally late this year, but they bore no traces of frost-bite or trail of disease. Even the ubiquitous Black Currant mite has not yet been seen at The Glen, and seldom have these and other bush fruits, Apples, Pears, Plums, Cherries, &c., looked more promising. Fruit indoors is also all that could be desired. The seedling Strawberry Glen Diamond is the favourite Strawberry here indoors and out. It is said to be a seedling from Keens'.

In the plant houses there were some fine specimens of Ericas, Palms, &c., while in one house was a fine lot of Malmaison Carnations.

D. T. F.



A view at The Glen, Innerleithen. From a photograph sent by Mr. D. T. Fish, 12, Fettes Row, Edinburgh.

the kitchen garden as well as the lawns and pleasure grounds. The elevation and unevenness culminate in the kitchen garden. It is almost a unique experience to find one's self climbing upstairs to the fruit and kitchen gardens. The crops suffer far less from the severities of spring frost on rolling grounds than on the flat or in the troughs of valleys.

Almost the first thing specially noted at The Glen was the very fine examples of Hodgkin's Holly some 20 feet through, clothing the bareness of the square of gravel and grass at the front door. Further up were a unique example

fortunately rather rotten on the surface, had to be dug out and good soil put in for the roots. In others the surface was deepened by additions of good soil. Over all a surface tilth had to be provided that would carry good grass and all other crops through all weathers. Oaks, Ashes, Beeches, Birches, Elms, and the fine golden Corstorphine Planes form important features in the furnishing of The Glen. The chief flowering shrubs hardly yet in flower in the last week in May were hardy Azaleas and Rhododendrons, though Thorns, Lilacs, Roses, Sweet Briers and other shrubs, and some fine

Value of the Locust Tree (Robinia Pseudacacia). — In the last century the advantages of cultivating this tree were somewhat unduly insisted upon, and as the results did not realise the hopes which were formed, the inevitable reaction followed, and it has since been too much neglected. To-day, however, we are enabled to form a juster estimate of its value. The Robinia is a very long-lived tree and may grow to a height of 70 feet to 80 feet and over with a circumference of 6 feet to nearly 10 feet, but to grow to these dimensions it should be isolated. In plantations and clumps of trees it thins itself at a very early stage and never comes to a great size. The root is at first a deep tap-root, but produces very long thin lateral spreading roots, which give out a wealth of suckers for some distance. The young stocks produce vigorous shoots. All soils suit it, and though it prefers those which are light and slightly cool, it thrives on dry, sandy ones. The wood of the Robinia, which shows very distinct annual increments, is heavy, hard, elastic, as durable as that of the Oak, with a vertical resistance superior by a third to that of the Oak, which places it in the first rank as a wheelwright's wood for making spokes. It is preferable to all other woods for laths, props, hoops, pegs employed in maritime construction, it takes a polish well, and is suitable for turner's work. It is not adapted for building, because the stem is seldom regular enough to yield timber of great size.

The wood of the False Acacia possesses for industrial purposes a higher value than that of native woods such as the Oak, Elm, Ash. It is excellent for fuel, producing a lively, lasting warmth, and is especially well suited for open hearths owing to the very great proportion of radiating heat it gives out. Nevertheless, it is held in little estimation by consumers on account of the fault attributed to it of emitting too many sparks. From what has been said above, the result is clear that the production of this tree as timber would not be profitable, but that it may be very useful as undergrowth. The tree is very suitable for planting in sandy soils and for holding embank-

ments together, and the leaves, green or dried, are good as fodder.—*Flore Forestière.*

FLOWER GARDEN.

A NOTE FROM KIRKCONNEL, N.B.

FROM early spring until late autumn one can hardly visit the garden of Mrs. Maxwell-Witham at Kirkconnel, Newabbey, N.B., without seeing something interesting in the way of hardy flowers. A visit paid the other day gives one pleasant recollections of the flowers then seen. The old garden Roses were at their best, and beautiful indeed was a number of the great bushes, some of which must be of great age. Some years ago Mrs. Maxwell-Witham gave an interesting account of these Roses in THE GARDEN, and I have more than once referred to them in your pages. One of the best is one named Swiss Boy, which is free-flowering and very beautiful. There were also big bushes, or rather trees, of others such as the Damask, the old Velvet, Maiden's Blush, Celestial, one with a curious spicy odour called here Plum Cake, besides a good many more or less well known. Some great bushes of *Kalmia latifolia*, which must, judging from their appearance, be very old, were also fine. The collection of herbaceous plants is very large, and now includes the greater number of our best border flowers. There was nothing finer, however, in its own way than the Kilmarnock form of *Orchis maculata*, with which Mr. Harper, the head gardener, seems very successful. There is a good stock of this magnificent *Orchis*, and the long, handsome, deep-coloured spikes made a fine effect in groups. There was a capital specimen of the creamy white *Amianthus muscetoicum*, a plant which appears to be coming into favour in the south-west of Scotland, and which does well in the district. *Alstromeria revoluta* has now become well established, and is apparently thriving and giving plenty of its deep orange-red flowers. *A. aurantiaca* and *A. lutea* were also good. *Erigeron salsuginosus*, said to be the true plant according to the late Asa Gray, and which I have seen at Kirkconnel before, is also good—better, indeed, than another plant offered under the name of *E. salsuginosus*. There is a small stock of the true old double white Scotch Rocket, now getting scarce in Scotland. I suppose we have now so many plants that people do not care to be at the trouble of propagating this, which is so much superior to the French White. At Kirkconnel there is a nice plant of the *Lychnis* sent out several years ago by an American firm as *L. Flos-cuculi plenissima semperflorens*. At first I did not care for this, but it improves upon acquaintance, and its long-flowering habit is certainly an advantage. *Inula glandulosa grandiflora* is very fine, but it may be noted that of the plants received at Kirkconnel from various sources under this name only one seems to be correct. This gives handsome flowers. *I. Hookeri* has also been good. *Chrysanthemum Clusii*, although not an effective garden plant, is useful for cutting. *Sidalcea oregana* was very pleasing, and I observed a nice plant of a *Morina* which seems like *Coulteriana*, but was not in flower. A capital double yellow *Potentilla californica*, which seems even better than Vase d'Or. The old double Martagon Lily is plentiful at Kirkconnel, while other Lilies which succeed are also represented. The large collection of *Pentstemons* looked hardly so vigorous as usual, but the choice and extensive variety of *Phloxes* will be fine in a short time. S. ARNOTT.

Salvia Tenoreana.—This is a plant of really exceptional merit and one that ought to prove valuable to those who prefer to rely mainly on hardy things for the summer decoration of their gardens. It is dwarf, but robust, very free-flowering, and in colour is sufficiently bright to be really effective. It cannot, of course, compare with its relative *S. patens*, but might well be used in combination with this useful old species. The

individual spikes last a long time and are produced in succession, so that the blooming period is a long one.—J. C. B.

Larkspurs for cutting.—I find these of great service through the summer months for supplying a quantity of cut bloom. The tall branching strain is the best, and by sowing about three times between the middle of March and the end of April one may have a good supply of bloom during July and August. With me these Larkspurs have become in a measure naturalised, springing up among Daffodils and other things, so that by leaving a plant here and there I get flowers for cutting with little or no trouble.—J. C. B.

Sweet Peas in hot weather.—I saw the other day in an amateur's garden a very showy row of mixed Sweet Peas, and could not but notice how happy they seemed in their semi-shaded position. I think gardeners would do well to avoid very hot positions for Sweet Peas which are to supply bloom say in July and August, especially when the soil is shallow and of a sandy nature. These beautiful flowers are often treated in a rough-and-ready manner, hence the limited period of blooming and sudden collapse of the haulm. Sweet Peas are often sown too thickly, the haulm consequently being too dense for the admission of sun and air and the rooting medium soon becoming exhausted. At this season, too, a mulching ought to be applied when growth is 6 inches high and manurial waterings given from that time till the last flower-trusses are opening. Frequent picking of exhausted blooms is also necessary, nothing being so impoverishing as a large number of seed-pods.—J. C.

Sweet Pea Butterfly.—I must confess that in most instances I prefer the bold, self-coloured tints in Sweet Peas, and such delightful kinds as Cardinal, with its rich red blossoms, appeal to me more than the paler-shaded and suffused colours. But the one named above is really a charming kind, almost snow-white, with a bluish mauve edging as distinct as that of a Picotee. The blossoms are large and of great substance, yet they lose nothing of the elegance and grace that we have learnt to associate with Sweet Peas. It is, in fact, one of the flowers that has been greatly improved in size and lasting qualities without being spoiled in any other way. Careful attention now to removing the old seed-pods is well repaid by the increased amount of flower produced, but unfortunately at this busy time of year the labour even of a boy can hardly be spared, and the Peas have to make the best of it. No plant pays for good culture better than these lovely annuals, and, looking through a so-called botanic garden in the neighbourhood recently, I could not help noticing the short-sighted policy that there obtains, viz., spending money upon seeds of named varieties, yet begrudging a little good soil and manure to enable these to show their true character.—H.

Coreopsis grandiflora.—Seedlings of this fine plant raised now and pricked off into nursery lines or beds will make nice stocky little plants for putting out in any vacant places that may occur in herbaceous or shrubby borders at any time in autumn or spring. This method of having a few herbaceous seedlings coming on is a very good one, for a bare place may be made gay, and if the right class of material is on hand, flowers for cutting will be produced in plenty. Whether for this purpose or for garden decoration, this *Coreopsis* is a plant for everybody and all seasons. No matter how wet and rough the weather is, the pretty yellow blossoms recover more quickly than almost any other, while should drought set in, it is as constant in bloom as in more seasonable weather. All through the drought of last summer, when everything in the flower garden seemed to be all but killed, its bright golden-yellow blossoms could be gathered daily, while the plants held their own bravely. It is best raised from seed occasionally, as, although it will last for years and continue flowering freely, the blossoms are always finest and best coloured

in the second and third years. It seems equally at home in all descriptions of soil, but of course does best when it is free-working and in good heart.

Water Lilies.—So far the beautiful new varieties of *Nymphaeas*, of which we have so many now, seem to be found only in private gardens, and thus the public have few opportunities to see them. There may be some few cases where cultivated in public gardens, as they are found at Gunnersbury House, for instance, but I do not know of them. I have often thought when visiting the popular gardens of Hampton Court of late what a fine opportunity is presented for the culture of these Lilies in the broad fountain basin. At present the water is bald and much lacking colour. Scarcely anywhere at a place of popular resort is a more suitable place for the purpose presented, for the basin is accessible all round; the Lilies would get ample sunshine, which they so much like, and the water is constantly being changed. There are at the palace end of the long water and the adjoining moat some luxuriant yellow *Nymphars* and common white *Nymphaeas*, showing how admirably the water suits them. Very much labour is expended both in spring and autumn in filling, at considerable expense, the many large flower beds in the grounds, and whilst every effort is made to vary the arrangements from year to year, yet little that is done can be described as novel. But Water Lilies once well established at Hampton Court would not only constitute to myriads a standing novelty, but would seem to be in singular harmony with the grand old palace and its surroundings.—A. D.

CALOCHORTI AT WISLEY.

THESE beautiful bulbous flowers are blooming with unusual vigour in Mr. Wilson's garden at Wisley this season. The flowers are large, fine in colour, and borne on stout footstalks from 2 feet to 3 feet high. Seeing them in this robust, happy condition, one might imagine that they are of comparatively easy culture, but, as many hardy flower growers have found to their cost, the requirements of these *Mariposa* Lilies are not easily realised. This at any rate is the impression that one gets from their appearance at blooming time in so many gardens wherein their culture has been attempted. The elements of success at Wisley appear to consist in a very free soil, perfect drainage, full exposure to the sun, with shelter from cold winds. They grow in a bed somewhat raised above the ordinary ground-level, and where it is impossible for the bulbs to suffer from stagnant moisture in a time of continued heavy rains. This probably is a most important factor in the successful culture of *Calochorti*, and unless it can be assured, expense and labour bestowed on them would be wasted. The character of the soil is an important item, that in which they grow at Wisley apparently being sufficiently light and free to preclude the possibility of it becoming clogged and sour when frequently saturated by heavy rains. Backed up by trees and facing the sun at noonday, the place is a sun-trap, which catches up and stores the solar warmth so that in late summer, when the bulbs are maturing, the soil around them must become very hot. No bulb can bloom well unless it is exposed to a certain amount of heat after flowering. The amount required varies wonderfully, as may be seen in the case of the Daffodil and the Freesia, the latter requiring exposure to the greatest amount of solar heat that can be accumulated in a glass structure after the foliage has died away; whereas *Narcissi* are content with that which they get in the early portion of an English summer. The *Calochorti* naturally demand as much sunshine as we can give them. It is possibly from want of realising this simple matter that many have failed to grow with success a race of hardy flowers which in quaint beauty and distinctness stand quite apart from hardy flowers generally.

I have endeavoured to describe the conditions under which these charming bulbous flowers grow

at Wisley, and those who have failed with them may perhaps gather enough from what is here written to enable them to rectify any errors hitherto committed and may give them courage to make a fresh start. One of the finest blooming at Oakwood is a form of *venustus* named *Vesta*, which has large, bold creamy white flowers with a dark ring round the throat. *Beathamii* is very similar, but the ring is broken up, which, I think, renders it less attractive. *Citrinus* is very bright yellow with dark spots; this is a charming and distinct kind which should be in every collection. *Luteus* is also bright and showy, and *venustus purpurascens*, suffused with purple and having the reverse of the petals deeply stained, is very handsome and distinct. J. CORNHILL.

Pentstemons.—There need be no fear of Pentstemons attaining to a good size and producing abundance of bloom the first year from cuttings provided good soil and good treatment are given. I recently saw a grand row in an amateur's garden. The cuttings were struck last autumn and planted out in February. One great point to be observed in order to obtain the best results is to give the cuttings a fairly rich, sustaining soil to root in. This makes all the dif-

ference. There seems to be some mystery or uncertainty as to whether there really is a yellow-flowered form of this plant, as a well-known introducer of new plants in Germany wrote to me recently that he had received a short time previously from St. Petersburg a quantity of seed of what purported to be *Incarvillea lutea*, but when it germinated the seedlings turned out to be *I. variabilis*. The fact of the flowers of the so-called *I. grandiflora* all rising on separate footstalks from the crown of the plant, as shown in your coloured plate, instead of being borne in bunches of from four to eight on the top of tall stems about a yard high, as in *I. Delavayi*, seems to me to constitute the only real difference between *I. grandiflora* and *I. Delavayi*, as the individual flowers do not seem to be of any greater size.—W. E. GUMBLETON.

NARCISSUS BISHOP MANN.

The illustration shows a group of the giant Irish cernuus or Bishop Mann (Swan's-neck variety). The photo was taken in a children's garden (the Misses Cornwall) at Moulefield, Cork. The variety is quite distinct from the type, by its length of trumpet and its twisted



A group of *Narcissus Bishop Mann*. From a photograph sent by Mr. W. B. Hartland, Cork.

ference. I do not advise putting them in too thickly, as they crowd each other and draw up spindly. The young plants also should be stopped when a few inches high, this securing side growths and good stocky plants. Nothing answers better than a frame in which the plants can be fully exposed in mild weather, even at midwinter. The plants also pay for a good larder in their flowering quarters. Pentstemons are excellent for cutting.—N. N.

***Incarvillea grandiflora*.**—The writer of the note accompanying your fine plate of the above-named most beautiful hardy plant seems to be of opinion that it is identical with *I. compacta* of Maximowicz. If, however, he had referred to the portrait of this plant in the volume of Regel's "Gartenflora" for 1882, plate 1068, I think he would have found good reason for altering his opinion, as the two plants are to my eye totally different—at all events from a horticultural point of view. The flowers of *I. compacta* are of a deep pink shade, much smaller in size than those of *I. grandiflora*, and do not rise out of the foliage on footstalks, as do those of the latter variety. They have also no different colour round the entrance to the throat, but merely a slight deepening or intensification of the colours of the rest of

petals, and was named at the Daffodil conference in 1886. It is very early, often flowering in the south of Ireland in February. In 1889, when the Countess and Lord Aberdeen occupied the Vice-regal Lodge in Ireland, the Countess expressed a wish that she should have a bouquet of open-air flowers for one of the drawing-rooms at Buckingham Palace. This beautiful Daffodil was made into a spray and was much admired. H.

***Lilium testaceum*.**—This is in every way a charming Lily, the prettily reflexed blossoms being arranged in a very graceful manner, while their colour (a kind of nankeen or buff) is particularly pleasing and totally distinct from anything else. The contrast, too, between the bright red anthers and the rest of the flower is also very noticeable. The blossoms remain fresh for a longer period than those of most other Lilies. When well established it is a particularly tall stately Lily, hence the name of *excelsum* which is sometimes applied to it is an appropriate one. Besides this it is sometimes known as *L. Isabellinum*. It is not at all a difficult Lily to cultivate, as it will succeed in any ordinary garden soil that is not

dried up at any time. Unlike several other species, it may be depended upon to flower well the first season after planting, while if required it may be successfully grown in pots. This Lily is a hybrid between *L. candidum* and *L. chalcedonicum*, but its early history appears to be lost. It is one of the Lilies so well done by the Dutch cultivators. *L. testaceum* is, except *L. candidum*, usually the first to appear above ground, and though the young foliage has a delicate appearance, it is seldom injured by frosts or cutting winds.—T.

PERFUMES FROM PLANTS.*

This list does not profess to be complete, since nearly every plant that grows has odour or fragrance of some sort or other, however slight it may be. Even species and varieties of the same species vary very much in odour, as is abundantly proved by species of, say, *Den-drobium*, *Reseda*, or *Diosma*, and by varieties of *H.P.* or Tea-scented Roses, Apples, Pears, or Sweet Oranges, no two varieties smelling or tasting precisely alike. This is even true sometimes of individual fruits off the same tree. All that is here attempted is to give a bird's-eye view of the plants most generally grown for fragrance, and especially of those having sweet-scented leaves as well as flowers.

ACACIA.—Shrubs or small trees mostly from Australia and North Africa. *A. Farnesiana* is largely cultivated at Grasse for its flowers.

ACHILLEA MILLEFOLIUM (Yarrow).—Aromatic herb, both foliage and roots being odorous.

ACORUS CALAMUS (Sweet Flag).—Largely grown from time immemorial for its rhizomes in the East. It is cultivated in fen districts in England, on the Continent, and especially on the shores of the Black Sea.

AJOMAN (*Ptychotis ajoman*).

ALLIACEOUS ODOURS.—Characteristic of Onions, Chives, Leeks, Garlic, &c. (*Liliaceae*). As showing that taste and smell do not always agree, we may instance that the taste or flavour of Onions, &c., is enjoyed by many who detest the smell of them. (Shakespeare, "Midsummer Night's Dream," iv., 2.)

ALLSPICE (*Pimento officinalis*).

ALOYSIA CITRIODORA (Lemon-scented Verbena).—A well-known shrub from Chili, deservedly much grown in gardens, and hardly in warm and sheltered corners near walls and plant houses. Its leaves retain their odour when dried, and are often placed in the teapot in Spain to add their aroma to the tea.

ANDROROGON CITRATUS (Lemon Grass).—This and several other species are grown or collected in India, Ceylon, &c., and the essential oil they produce is known as "Indian Geranium" oil. It is grown as a stove plant, and its leaves when fresh are used for flavouring confectionery.

ANGELICA ARCHANGELICA (*A. officinalis*).—A tall herbaceous plant the fleshy stems of which are very aromatic, and are candied or preserved in syrup and used in confections. Oil of Angelica is used in Chartreuse and other liqueurs.

ANGOSTURA (*Galipea cusparia*).—Used as a tonic stimulant.

ANISE (*Pimpinella anisatum*).

ANTHEMIS NOBILIS (Chamomile).—A dwarf evergreen composite plant, grown for its single or double Daisy-like flowers, which are used medicinally.

ANTHONANTHUM ODORATUM (Sweet Vernal Grass).—This grass belongs to the Coumarin series of perfumes, and gives its peculiar fragrance to the hay crop. The essential oil is used in perfuming cheap tobaccos, &c.

ARTABOTRYS (*Artabotrys odoratissima*).—A flowering shrub having aromatic leaves and very sweet Apple-scented flowers, from which a perfume is derived. The leaves have been used in Java as antispasmodic in cholera, as also those of *Melaleuca minor*.

* Paper by Mr. F. W. Burbidge in the Journal of the Royal Horticultural Society.

ARTEMISIA ABROTANUM (Lad's Love, or Old Man).—A well-known plant in most cottage gardens, having finely cut and agreeably aromatic leaves. *A. Absinthium* is "Wormwood" used in rustic medicine and in the manufacture of absinthe in France and Belgium.

ASPERULA ODORATA (Woodruff).—A little rubiacous woodland plant having whorled leaves and white flowers, deliciously aromatic, somewhat like the Sweet Vernal Grass, used fresh or dried in posies and bouquets, and sweet bags. The flowers infused in Rhine wine yield the "Maitrank" of Germany.

AZARA MICROPHYLLA.—An evergreen shrub or small tree from Chili bearing a profusion of greenish yellow flowers beneath its branchlets in March and April, and yielding a delicious perfume of vanilla.

BALDO (*Peumus fragrans*).—Somewhat like Sweet Gale (*Myrica Gale*).

BALM (*Melissa officinalis*).

BALSAM OF MECCA (*Balsamodendron Opobalsamum*).—Aromatic gum resin, highly valued by the Arabs and Indian Mussulmans.

BALSAM OF PERU (*Pereira myrospermum*).—A leguminous tree, native of Central America; but the balsam is now rarely obtained and little used. It was employed for chronic coughs, ulcers, and in the making of pastilles.

BALSAM OF TOLU (*Myrospermum toluifera*).—Similar to the last and employed in same way, but now rare.

BALSAMITA VULGARIS (Costmary or Alecost).—A hardy herbaceous plant from Italy having balmy or aromatic foliage.

BAROSMA CRENULATA (Buchu leaves).—Evergreen shrubs from South Africa.

BASIL (*Ocimum basilicum* and other species).—Basil is a delicious pot-herb much used in the south of Europe.

BDELLIUM (*Boswellia glabra*).—A gum resin from *Balsamodendron africanum* (African Bdellium). *Amyris Bdellium* or *Balsamodendron Roxburghi* is "Indian Bdellium."

BENZOIN (*Styrax Benzoïn*).—Not to be confounded with *Laurus Benzoïn*. It is an aromatic gum resin, not much used except in incense. Native of Borneo and Indian islands. It is sometimes called "Gum Benjamin." False Benzoïn is obtained from two or three species of the genus *Terminalia*.

BERGAMOT (*Monarda didyma*).

BITTER ALMOND.—Yielded also by Cherry Laurel (*Cerasus Lauro-Cerasus*).

BLUEBELL (*Scilla nutans*).

BORONIA MEGASTIGMA.—Nearly all the species have aromatic leaves, but in the one named the brown and yellow-lined flowers are deliciously fragrant. It is a well-known Australian plant, largely grown now for its perfume both on the Continent as well as in English gardens.

BOSWELLIA SERRATA (Frankincense or Gum Olibanum).—An Indian tree yielding an aromatic gum that is one of the principal ingredients in modern as of ancient incense.

BOX TREE (*Buxus sempervirens*).—A well-known native evergreen tree which O. W. Holmes describes as "breathing the fragrance of eternity, for this is one of the odours which carry us out of time into the abysses of the unbeginning past."

BACHU.—The leaves of *Barosma crenulata*.

CAJUPUT (*Melaleuca Cajuputi* and *M. minor*) yields greenish aromatic essential oil, employed as an antispasmodic and stimulant. The leaves are used in China and Malaysia as a tonic in the form of a decoction.

CALIFORNIAN BAY.

CALYCANTHUS FLORIDUS (Carolinian Allspice).—Young and fresh flowers, as also the bark, agreeably scented.

CAMEL GRASS (*Andropogon lanigerum*).—Another scented grass allied to Lemon Grass.

CAMPHOR (Kopher, H.).—*Dryobalanops Camphora*, D. aromatic, and probably other species, forming large forest trees in Borneo and other Eastern islands, where, as in China, Camphor-wood trunks and boxes are valued as resisting the termites, or white ants.

CAMPHOR is also obtained from *Laurus Camphora*, a tree found wild in Formosa, and it also exists in the common Rosemary (*Rosmarinus officinalis*). Antispasmodic.

CAMPHORA (*Laurus*) **OFFICINARUM** (Chinese Camphor Tree).

CANELLA (*Canella alba*) produces an aromatic bark.

CARAWAY (*Carum Carui*).—Seeds used in confectionery, and yield aromatic essential oil.

CARDAMOM (*Elettaria Cardamom*).—Seeds used a stimulant, or to chew after smoking, or they yield an essential oil.

CARNATION (*Dianthus caryophyllus*).

CASSIA CLOVE (*Dicypellium aromaticum*).—The sweet bark is used sparingly.

CEDAR.—*Juniperus bermudiana* and various species of the genus *Cedrela*, of which cigar boxes are often made. The timber of *Cedrus Libani* (Cedar of Lebanon) is only of use for building cabinet-work or fuel.

CEDRELA ODORATA (Barbadoes Cedar Tree; *C. sinensis* is Chinese Cedar Tree).

CEREUS GRANDIFLORUS (Night-scented Cactus).—Nearly all night-blooming Cacti or Cerei are perfumed.

CHAMOMILE (*Matricaria Chamomilla*).

CHAMPAC (*Mitchelia Champaca*).—One of the sweetest and most highly prized of all the scented flowers of the East; in appearance like a small *Magnolia*.

CHEIRANTHUS CHEIRI (Wallflower).—Grown by the acre near all large towns for its fragrant flowers. Found on old walls, as at Conway, Nottingham, &c. Everywhere in Britain and Normandy it merits its popular name, and with sweet Violas and Mignonette sweetens many a cottage garden.

CHRYSANTHEMUM INDICUM (garden Chrysanthemum, Queen of Autumn).—Both flowers and foliage possess an aromatic Pyrethrum-like odour.

CINNAMON (*Cinnamomum zeylanicum*).—This aromatic tree produces bark of a highly aromatic character. This bark in a powdered state is often used as a condiment at meals and in cookery. Oil of Cinnamon is inimical to bacteria. *Cinnamomum Cassia* is most aromatic.

CITRINE ODOURS.—Characteristic of aurantiaceous plants (Orange family), leaves and rind of the fruit: also in *Aloysia citriodora* and in many *Eucalypti*. Large quantities of Orange leaves as well as flowers and fruits are grown for the perfume industry in Italy, South France, and Spain.

CITRUS AURANTIUM (Orange), *C. Limonum* (Lemon), and *C. Limetta* (Lime fruit), and many other varieties are largely grown for flavours and perfumes in South Europe and North Africa, and in the East (see Bonavia "Oranges and Lemons of India and Ceylon").

CLETHRA ALNIFOLIA (Mignonette Tree).—A large shrub or small tree from North America bearing very sweet flowers.

CLOVE (*Caryophyllus aromaticus*).—The young flower-buds dried are the cloves of commerce, yielding a powerful and agreeable essential oil fatal to many putrescent bacilli.

COMPTONIA ASPLENIFOLIA (Sweet Fern Bush).—Leaves smell like Bog Myrtle.

CORIANDER (*Coriandrum sativum* and other species).

COTTON LAVENDER (see *Santolina*).

COUMARIN.—Hayfield odour, given off by Sweet Vernal Grass and Woodruff (*Asperula odorata*) when partially dried.

CRATEGUS OXYCANTHA (Hawthorn or Sweet May).

CRINUM ASIATICUM and many other handsome fragrant species.

CUMIN (*Cuminum Cyminum*).

CURCUMA ZEDOARIA, *C. ZERUMBET*, and other species have very aromatic rhizomes, leaves and flowers, or seeds.

CYCLAMEN PERSICUM.

CYPERUS ROTUNDUS (Sweet Sedge) and other kinds have aromatic rhizomes or stems, tubers, &c.

CYTISUS FRAGRANS.

DATURA (*Brugmansia*) **SUAVEOLENS**.—A well-known greenhouse shrub bearing large, pendent, bell-shaped flowers, very sweet at night.

DIANTHUS CARYOPHYLLUS (Carnation, July or Gillyflower).—All the family of Pinks, Cloves, Carnations, &c., are most deliciously fragrant. "Sops in Wine" were Clove or Carnation blooms thrown into wine flagons for the sake of their rich aroma.

DILL (*Anethum graveolens*).

DIOSMA ERICOIDES and many other species have very aromatic foliage, and are well-known greenhouse plants.

DRACENA (*Cordylina*) **FRAGRANS** and other species.

ELEMI (*Canarium commune*).

ELETTARIA CARDAMOMUM (Cardamoms).—A warm greenhouse plant resembling Ginger in habit, but hardier, and having richly aromatic foliage. It is a good room plant during the summer months, and is easily grown.

ESCALLONIA MACRANTHA (Shelter Bush).—With sticky, aromatic foliage. One of the best of all evergreen plants for shelter hedges in wind-swept localities.

EUCALYPTUS.—*Eucalyptus globulus*, *E. citriodora*, and many other (seventy to eighty) species. All the species are aromatic, and yield essential oils, but *E. citriodora* is one of the sweetest. *E. globulus* and others yield "Eucalyptol."

EURYANGIUM SUMBUL.—A strong-growing umbelliferous plant of Turkestan and North India used medicinally. The rhizome smells of angelica and musk.

FENNEL.—*Foeniculum dulce*, *F. officinale*, &c.

FRAGARIA ELATIO (Strawberry).—The scent of dying Strawberry leaves in the early sunshine of a frosty morning is one of the rarest and most delicious of all the scents or perfumes of the garden.

FRANGIPANI (*Plumeria rubra*, *P. allia*, *P. fragrantissima*, &c.).—Commonly planted on graves in Borneo and Malayan islands. The Italian scent named "Frangipani" is a powder, or sachet, made of equal proportions of all known spices mixed with Orris-root and 1 per cent. of Musk and Civet. An alcoholic extract of this "pot-pourri" is the most enduring scent known.

FRANKINCENSE (Olibanum).—*Boswellia serrata*.

FRENCH HONEYSUCKLE (*Hedysarum coronarium*).

FRENSIA REFRACTA (Freeseias).—All the Freeseias emit a subtle and delicious perfume, although by some who are partially anosmic their odour cannot be detected.

GALANGALE (*Alpinia officinarum*).—A Ginger-like plant having aromatic rhizomes and seeds.

GALBANUM (*Ferula galbaniflua*).—A gum resin resembling that of *F. narthex*, the source of *asafoetida*.

GALIPEA ODORATISSIMA.—A Brazilian tree that yields the *Angostura* bark of commerce, sometimes used as a tonic bitter, especially in the colonies and abroad.

GARDENIA (Cape Jasmine) (*Gardenia florida* and *G. radicans*).—Known as the Cape Jasmine. These shrubs have highly perfumed flowers, and yield by stilling a delicious perfume.

GERANIUM (see *Pelargonium*).—Many species of *Geranium* and *Erodium* have scented foliage when touched or bruised.

GINGER (*Zingiber officinale*).—Much grown and largely used as a sweetmeat in China and the West Indian islands; also used in cordials and in cookery. For preserving in China species of *Alpinia* and *Hedychium* are often used.

GLECHOMA HEDERACEA (Ground Ivy).—An aromatic creeping labiate with balmy odour, formerly infused in ale for its flavour.

GRAINS OF PARADISE (*Amomum Melegueta*, *A. grana Paradisi*, &c.) produce hot aromatic seeds in globose or triquetrous capsules. They are closely related to Ginger and Cardamoms. The seeds have a camphorated flavour, and have been illegally used in doctoring beer at the risk of a heavy penalty.

GUAVA (*Psidium guava*, *P. pomiferum*, *P. Cattleianum*) is the Chinese purple Guava,

generally compounded into a delicious flavoured jelly or pomade.

GUM CISTUS, or **LADANUM** (*Cistus creticus*), and many other kinds, such as *C. ladaniferus*, of Spain and Portugal, yield an aromatic gum resin used in perfumery and fumigations by Oriental people.

GYMNEA SYLVESTRE.—This is an asclepiaceous plant, leaves of which were sent to Kew from Madras. After chewing the leaves, neither sweet nor bitter substances can be distinguished in the mouth. Salts, acids, astringents, and aromatics are unaffected (see *Gard. Chron.*, April 23, 1897, p. 550).

HAWTHORN (*Crataegus Oxycantha*).—A well-known native tree with fragrant, white clustered flowers. There are double, and rose, pink, and crimson forms.

HEARTSEASE (see *Viola*).

HEDYCHUM SPICATUM.—The dried roots or rhizomes are pounded and used in the form of incense, and also as a medicine in India.

HEDYSARUM CORONARIUM (French Honeysuckle).—A crimson-flowered biennial plant well worth culture.

HELIOTROPE (*Heliotropium peruvianum*).—Well-known sweet-scented flowering shrubs from Peru. Their flowers are redolent of "Cherry Pie," and are used in Spanish confectionery, &c.

HENNA (*Lawsonia inermis*).—Much used from Egypt eastward, and mentioned in Song of Solomon. It is a dye tinting the nails red.

HESPERIS MATRONALIS (Sweet Rocket).

HONEYSUCKLE (*Lonicera Periclymenum*).—Native Woodbine.

HOREHOUD (*Marrubium vulgare*).

HUMEA ELEGANS.—A composite greenhouse plant, with leaves scented like Russian leather.

HYACINTH (*Hyacinthus orientalis*).

IBERIS ODORATA (Sweet Candytuft).

ILANG-ILANG (see *Ylang-Ylang*) (Flower of Flowers).

IRIS FLORENTINA (Orris Root).—The dried rhizomes of this and other species of German or Flag Iris are agreeably scented like Violets, and form the basis of violet powders and other dry perfumes for pomanders, bags, or sachets, &c. Orris Root is largely cultivated, dried in the sun, and prepared in S. France and Italy.

JASMINE.—This is one of the most distinct of all natural odours, and the only one that cannot so far be made artificially, afforded by *Jasminum officinale* and other species grown all over tropical and temperate regions. In the East, Jasmine flowers are rolled up in the well-oiled hair of the women at night, so as to scent the hair and skin next day.

JONESSIA (see *Saraca*).

JONQUIL (*Narcissus Jonquilla*) and various forms of *N. Tazetta*.—Much grown for perfume at Grasse, Cannes, and elsewhere along the Riviera.

JUGLANS REGIA (Walnut).—The agreeable fragrance of crushed Walnut leaves is much enjoyed by most people, but so far as I am aware it has not gained the attention from perfumers that its distinctness would seem to deserve.

JUNIPER (*Juniperus*).

LASTREA MONTANA, *L. EMULA*, and other species are scented.

LATHYRUS ODORATUS (Sweet Peas).—Well-known and exquisite annuals.

LAURELIA AROMATICA (Sweet Laurelia).—A rare evergreen with fleshy and deliciously fragrant foliage, hardly only in very warm and sheltered localities. It grows 20 feet high in Co. Wicklow.

LAURUS NOBILIS (Sweet Bay).—Foliage aromatic and much used for flavouring confectionery, Figs, sardines, &c. *Laurus Sassafras* is N. American Spice Bush, having perfumed leaves and aromatic bark. The Cherry Laurel is *Cerasus Lauro-Cerasus*, and its prussic acid-like odorous leaves are now and then used in flavouring, also as insecticides.

LAVENDER (*Lavandula vera*, *L. spika*, *L. stachys*).—Very abundant as a wild plant in Spain, where it is called "Romero Santo." Largely grown at Mitcham, Surrey, and elsewhere in England, the oil being exported and

made into lavender water, eau de Cologne, &c. Lavender is now largely cultivated in Australia and New Zealand.

LAWSONIA INERMIS (see *Henna*).

LIGN ALOES (*Aquilaria Agallocha*).—Also known as Wood Aloes.

LILAC (*Syringa persica*).

LILIUM CANDIDUM (White Lily).—This and many other species bear perfumed flowers, some, as *L. auratum*, being too strongly scented for indoor use.

LILY OF THE VALLEY (*Convallaria majalis*).—One of the sweetest and most exquisite of all our native flowers.

LINDERA SERICEA (see *Benzoin*).

MACE (see *Myristica*).

MAGNOLIA (*Magnolia foetida* and other species).—The Yulan or Water Lily Tree of China and Japan, *M. fuscata* and others have highly perfumed flowers.

MALVA MOSCHATA (Musk Mallow).

MARUBIUM VULGARE (Horehound).—Aromatic herb used in cough lozenges and other confections.

MATRICARIA CHAMOMILLA (Chamomile).—The flower-heads are used in medicinal stupes and infusions with advantage.

MATTHIOLA BICOENIS (Night-scented Stock).

MEADOW SWEET (*Spiraea Ulmaria*).

MENTHA, various species (see *Mint*).—"Menthol" is a product of this genus.

MIGNONETTE (*Reseda odorata*).—A sweet-scented annual from N. Africa, highly esteemed for its odour. There are many other species, but none so sweet as this.

MIMULUS MOSCHATUS (Musk).—Well-known cottage garden and window herb.

MINT (*Mentha Piperita*, &c.).—Much grown at Mitcham and elsewhere in S. England for distilling. (Black Mint is said to yield 30 lb., and white 20 lb. per acre.) Pennyroyal is *Mentha Pulegium* var. *gibraltarica*, a well-known diuretic; *Mentha odorata* is Bergamot Mint; *Monarda didyma* is Oswego Tea; Balm is *Melissa officinalis*; *Cedronella calamint* is Mountain Balm; Basil Balm or Basil Mint is *Melissa acinos*.

MONARDA DIDYMA (Bergamot, Oswego Tea).—N. America swamp plant, with an agreeable fragrance either fresh or dried.

MYRICA GALE (Sweet Gale or Bog Myrtle).

MYRISTICA OFFICINALIS (*M. moschata*).—A tropical tree yielding Nutmegs and Mace, well-known spices.

MYRRH (*Balsamodendron Myrra*).—Gold, Frankincense, and Myrrh in silk bags are still presented at the offertory in the Chapel Royal, St. James's Palace, on Twelfth Day by two gentlemen of the Lord Chamberlain's Office, but formerly by the Sovereign in person.

MYRRIS ODORATA is a fragrant umbelliferous plant worthy of culture for its aromatic perfume when touched or bruised.

MYRTLE (*Myrtus communis* and many other species).—Well-known aromatic shrubs, easily grown in greenhouses or in sheltered warm localities out of doors.

MUSK (*Mimulus moschatus* and *Delphinium Brunonianum*).—Animal musk is from the musk deer, &c., and ambergris from a kind of whale.

NUTMEGS and **MACE** (*Myristica moschata*).—Nutmegs are well-known aromatic fruits grated as a spice. The mace, or arillus, is the inner coat of the nut beneath the orange outer husk, and is also very sweet and grateful as a spice.

OLEA FRAGRANS.—Sweet white flowers, used in China for scenting Tea, &c. (see *Osmanthus*).

OLIBANUM (*Boswellia serrata*).—Supposed to be the frankincense of the ancients.

OPOPONAX (*Opoponax Chironium*).—From the south of Europe, in habit like a Parsnip; 6 feet high; yields a fragrant gum resin, very aromatic, but now not much used.

ORCHIDS.—A large number of tropical species, are very fragrant, the white and green flowered kinds especially at night, others at different periods of the day. A good list is given in Donald McDonald's "Sweet-scented Flowers and Fragrant

Leaves," pp. 85-90. Vanilla is the fruit pods of *Vanilla planifolia*, &c., used in flavouring chocolate and confectionery. Orchids rarely possess a perfume that is not also yielded by other flowers. *Anguloa Clowesi* smells of Fenugreek; *Dendrobium macrophyllum* like Turkey Rhubarb; *Lycaste Harrisoni* smells like roasted Apples; *Odontoglossum Roezli* like Wild Field Rose (*R. arvensis*).

OSMANTHUS (*Osmanthus fragrans*) and other species (see *Olea*).

PANCRATIUM (*Hymenocallis*) **FRAGRANS** (Wedding Lilies) and other species.—Deliciously fragrant.

PATCHOULI (*Pogostemon Patchouli*).—A low, soft-leaved labiate shrub with scented leaves, that were formerly used to scent the Indian shawls.

PELARGONIUM (*Geranium*).—Many species and varieties of the Cape Pelargonium have sweet-scented foliage, and are much grown for the decoration of rooms and conservatories on that account. Their dried leaves are useful for pot-pourri, &c.

PERGULARIA (*P. odoratissima*).—The flowers are deliciously fragrant and yield a choice perfume.

PHILADELPHUS (Mock Orange, *Syringa*).—All the species and varieties bear sweet-scented flowers, similar to Orange blossoms in the bud state. The green leaves possess a flavour similar to that of Cucumber, and may be used sparingly in claret cup as a substitute if Cucumbers are not available.

PIMENTO, or **ALLSPICE TREE** (*Pimento officinale* and *P. acris*).—The last-named being largely used in making West Indian bay rum. In 1886 the exports of Pimento from Trinidad = £46,704, and in 1896 they had increased to £90,046. Little Dominica exports £4000 worth of bay leaves and oil; Trinidad grows ten times the quantity, none being utilised for export.

POLIANTHES TUBEROSA (Tuberose).—Largely grown in South France for perfume, native of India. The fading flowers, like those of *Tropaeolum*, have been seen to emit flashes of light at night.

PRIMROSE (*Primula acaulis*).—This genus of many species found nearly all over the world contains many with delicate odours, but none more delicious than our wild Primrose, Oxlip, and Cowslips of the meadows.

ROCKETS (*Hesperis matronalis*).—Well-known fragrant garden plants.

RONDELETIA (*Rondeletia odorata*).

ROSACEOUS ODOURS.—The Eastern Attar or Otto of Roses is one of the most delicious and valuable of perfumes in its pure state, but it is often largely adulterated by the addition of Indian "Geranium" oil (*Andropogon*).

ROSEMARY (*Rosmarinus officinalis*).—A very similar oil is afforded by *Cedrela Rosmarinus* of North China.

ROSES.—An enormous genus, most of which produce deliciously perfumed flowers. Attar de Rose from Persia, Cashmere, Turkestan, &c., when pure is one of the choicest and rarest of perfumes.

SALVIA RUTILANS (Pine-apple Sage).—This is a fragrant greenhouse plant. *Salvia officinalis* is common "garden Sage" used for flavouring.

SAMBUCUS NIGRA (common Elder).—The leaves have an odour that helps to keep away flies, especially if mixed with those of Tansy. Flowers sweet, used for Elder-flower water.

SANTALS.—In 1875 Mr. C. T. Kingzett, after observing the excess of ozone and salubrity of the air near to Pine and Fir tree plantations, and conceiving that this was in part due to their volatile oils producing peroxide of hydrogen and camphoric acid, formed these reagents by a process involving the decomposition of turpentine, and it was made and sold in 1877 under the above name.

SANTAL (*Santalum album*).—Indian sandalwood, much used for cabinet-work and for burning in place of pastilles in India and the East. Said to be one of the ingredients used in making the "joss-sticks" of the Chinese.

SANTOLINA CHAMÆCYPARISSUS (Lavender Cotton).—A woolly-leaved little shrub with aromatic

leaves, useful for edgings or low fences. Grows well in hot and barren places. Sprigs of it are useful for mixing with dried Lavender to keep away moths.

SARACA INDICA (= *Jonesia asoca*).

SASSAFRAS (*Sassafras officinale*).—This and one or two other species have aromatic bark and nuts or seeds which yield a scented oil.

SATUREIA OFFICINALIS (*Savory*).—Pot-herb.

SCILLA NUTANS (*Bluebell*).

SOUCHET (*Cyperus* species).—The dried tubers are used. *C. longus* is "English Galangale" (*Gerard*).

SPIKENARD (*Nardostachys Jatamansi*).—A dwarf Valerian having an aromatic root, found in North India, and long ago very highly prized. It is now supposed to be the "nard" or "nerd" of the Scriptures, and one of the ingredients in the alabaster box of ointment used by Mary in anointing the feet of our Lord. "Ploughman's Spikenard" is the root of *Inula Conyza*, of which Ben Jonson asks: "Have you smelt the bud of the brier or the nard in the fire?"

SPURGEA ULMARIA (*Meadowsweet*).—Leaves odorous and quite different from scent of the flowers.

STAR ANISE (*Illicium verum*).

STEPHANOTIS (*Stephanotis floribunda*) Climbing Tuberose.—A well-known stove-climbing shrub having clusters of tubular and highly perfumed flowers.

STOCKS (*Matthiola incarna*, *M. tristis*, &c.).—Several kinds, both day and night bloomers, and highly perfumed.

STORAX (*Styrax officinalis*).—This shrub is found in the Levant, but its balsamic resin is not now easily obtained. The storax now used is from *Liquidambar orientale*, found in Asia Minor. Used in perfumery and as an expectorant.

SWEET BAY (*Laurus nobilis*).—A well known aromatic evergreen, bark, leaves, and fruits being very fragrant. Long grown in European gardens and often used for funeral wreaths.

SWEET FLAG (*Acorus Calamus*).—Long used as a perfume plant. It was the common perfume of the Romans, but they prized more highly the Roses of *Pæstum*, *Spikenard*, *Telinium*, *Medebathrum*, *Onegalum*, *Balm of Gilead*, and *Cinnamon*.

SWEET-SCENTED GOLDEN ROD (*Solidago odora*).

SYRINGA PERSICA, &c. (*Lilac*).—One of the sweetest of hardy garden shrubs. Forced Lilac is deliciously sweet.

TANSY (*Tanacetum vulgare*).—Fern-like foliage aromatically scented, and it is now and then used in order to try and keep flies out of rooms. Used also in cookery, Tansy puddings, &c.

THYME (*Thymus vulgaris*).—A well-known garden herb and the source of "Thymol," &c. *T. citriodorus* is *Lemon Thyme*. There are many species grown as rock plants, all more or less scented.

TODDALIA (*Toddalia aculeata*).

TONQUIN BEAN.—Seeds of *Dipteryx odorata* (*Willd.*), from Guiana.

TUBEROSE (*Polianthes tuberosa*).

TUSSILAGO FRAGRANS (*Sweet Tussilage*, *Winter Heliotrope*).—An Italian plant naturalised abundantly near Dublin and elsewhere, and flowering freely in January and February, when roads and lanes are redolent with its *Heliotrope*-like perfume. It is a dreadful weed in many Irish gardens.

VALERIAN (*Valeriana Wallichii*).—Now and then used as an aromatic, and in medicine more rarely as a stimulant and antispasmodic. The dried root of *Valeriana officinalis* is very attractive to cats, and is said to be employed by rat-catchers to decoy their victims to their traps. *V. celtica* has fragrant rhizomes used in toilet mysteries like *Sambul*.

VANILLA (*Vanilla planifolia*, *V. aromatica*, and other species).—The fruits or beans are long and dark brown, or chocolate-coloured, and possess a very strong aroma, flavour, and perfume. The essential flavouring principle of Vanilla can now be made artificially from Pine-tree sawdust. Both the natural and the chemical products are

used for flavouring chocolate and other sweetmeats. Vanilla is sometimes adulterated with *Tonquin Bean* extract.

VEGETABLE WAX or **CANDLEBERRY** (*Myrica cerifera*).—The fruits are coated with a waxy resin from which aromatic candles are, or were, formerly made in America.

VERBENA OFFICINALIS (*Vervain*, *Herb of Grace*).

VETIVER (*Andropogon schenanthus*).—The oil of *Andropogon* is sometimes called "Indian Geranium" oil, having a citrine odour. Used to adulterate *Attar of Roses* and in the manufacture of cheap perfumes. Used in India for screens or "Cuscus tatties."

VIOLET ODOURS.—The well-known Sweet Violet (*Viola odorata*) in all its forms, also present in some Orchids and in *Orris Root* (*Iris florentina* and other species). Violets and Iris are largely grown in Italy, Sicily, Sardinia, and South France for the perfume trade. All the garden Violas or Tufted Pansies are sweet and exquisite garden flowers. *Violetta* and others of Dr. Stuart's race of rayless Violas are charmingly dwarf, dainty, and sweet-scented.

VITIS RIPARIA and other wild Grape Vines of North America have sweet-scented flowers.

WALLFLOWER (*Cheiranthus Cheiri*).—One of the hardiest and sweetest of all our native flowers.

tivation of plants of distinct appearance, even if not showy. This Foxglove ought to please such. There is a good, if short, description of it in Nicholson's "Dictionary of Gardening," but such can hardly give an idea of the character of the spike before me. The flowers are small, white, reticulated with brown or purple, and protrude only a little from the woolly bracts. The spike is woolly also, and this constitutes one of the distinct features of this Foxglove. It is a perennial and comes from Eastern Europe. Those who have access to the *Botanical Magazine* will find a plate in that work, tab. 1159.—S. ARNOTT.

GARDEN FLORA.

PLATE 1232.

MALAYAN RHODODENDRONS AND THEIR HYBRIDS.

(WITH A COLOURED PLATE OF R. EXQUISITE.*)

SEVERAL distinct Rhododendrons occur on the numerous islands of the Malayan Archipelago, and though beautiful in themselves, this is not their greatest claim to recognition, for, thanks to the skill of the hybridist, quite a distinct



Rhododendron multicolor Curtisi.

WINTER GREEN (*Gaultheria procumbens*); also from *Betula lenta*.

WINTER SWEET (*Chimonanthus fragrans*).—Waxy yellow flowers produced in winter with a spicy perfume.

WISTARIA SINENSIS (*Chinese Wistaria*, or *Pergola Flower*).—Drooping racemes of deliciously sweet purple or white Pea-like blossoms.

WOODRUFF (*Asperula odorata*).

YARROW (*Achillea Millefolium*).

YLANG-YLANG, **ILANG-ILANG** (*Cananga odorata*).—A tree growing in Java, Borneo, &c., with very fragrant yellowish green flowers. The name literally means "flower of flowers," and the extracted perfume is more valuable than *Attar of Roses*.

ZEDOARIA (*Curcuma*).—*C. Zerumbet* and many other kinds.

Digitalis lanata.—I am obliged to Mr. A. Black for sending me from Carton, Maynooth, a nice spike of this Foxglove. Although not a new plant, it has not come under my notice before. The Woolly Foxglove was introduced in 1789, and on reference to the *Kew Hand-list* it appears to have been in the Royal Gardens when that publication was issued. It cannot be called a showy plant, but one finds that there is a growing inclination on the part of a considerable number of flower growers to embark upon the cul-

section of Rhododendrons has been obtained by continuous intercrossing of these original species and of the numerous hybrids raised therefrom. In all, seven species have played a part in the production of this class, which is generally known, besides the name of Malayan, as Tube-flowered, Javan, or Perpetual-flowering Rhododendrons. The seven species above referred to are—

RHODODENDRON BROOKEANUM GRACILE.—A loose-growing shrub, native of Borneo, where it often occurs as an epiphyte. The flowers are large and of a pale yellow colour. It was introduced by Messrs. Veitch through their collector, Thomas Lobb, in 1855.

R. JASMINIFLORUM.—This well-known kind, with its small rounded leaves and profusion of long-tubed white flowers, is a native of Mount Ophir, Malacca, and was introduced in 1845. It is particularly interesting as having, in conjunction with the orange-coloured *R. javanicum*, given us the first hybrid of this class, viz., the pink-flowered Princess Royal.

R. JAVANICUM.—This is a large, loose-growing shrub, with leaves sometimes nearly 6 inches long and half that in width. The flowers are large and

* Drawn for THE GARDEN by H. G. Moon in Messrs. Veitch and Sons' nursery at Chelsea. Lithographed and printed by J. L. Goffart.



PIRELLA GÖTTSCHE LOWE

vary in colour from deep yellow to reddish orange. This *Rhododendron* is a native of the mountainous regions of Java, and was introduced about 1850.

R. LOBEL.—A good-sized loose-growing bush with peculiar flowers of a bright crimson colour. The tube is narrow, curved, and about 3 inches long, while the expanded mouth of the flower is not more than an inch in diameter. It is a native of Borneo, and was introduced by Messrs. Veitch.

R. MALAYANUM.—A small compact-growing shrub with lanceolate leaves and tiny crimson flowers. It was introduced from Sumatra by Messrs. Veitch.

R. MULTICOLOR.—The most recent introduction of the seven. This is a little shrub with short, almost thimble-shaped blossoms of a pale yellow tint. There is a variety *Curtisi* in which the flowers are crimson. Both were sent home by Mr. Curtis when travelling for Messrs. Veitch in Sumatra.

R. TEYSMANNI.—This, somewhat in the way of *R. javanicum*, has large flowers of a soft yellow colour. A native of Sumatra.

While the name of Veitch occurs largely in this list of imported species, it is even more pronounced among the hybrid kinds, for nearly all those in cultivation have been distributed by the firm in question, and, with the exception of two or three of the oldest, they have all been raised at Chelsea. Mr. Heale is well known for the great improvement he has effected in many classes of plants by a systematic course of hybridising, but if he had done nothing more than raise the numerous charming *Rhododendrons* of this section he would be entitled to the thanks of all plant lovers. The introduction of *R. multicolor* and its variety *Curtisi* in the early eighties was a great boon, and one soon taken advantage of. Since then we have had several varieties showing the influence of *R. multicolor* to a greater or less extent. This is manifest in the dwarfier habit of the plant and the shorter tube to the flower. The species and their varieties have been so frequently intercrossed, that some of the forms now in cultivation are hybrids of the second or third generation, but the subject of the coloured plate—*Exquisite*—is derived from two of the original species, viz., *R. javanicum* and *R. Teysmanni*. The general aspect of the plant is more like the female parent (*R. javanicum*), but the flower shows the paler tint of *R. Teysmanni*. The variety *Ceres* (illustrated in *THE GARDEN*, February 20, 1892) was produced by the reverse cross. The flowers of this are of a distinct shade of rich tawny yellow. Another particularly large-flowered variety, like the two just noted, is *Cloth of Gold*, with bold trusses of light golden yellow blossoms. Other desirable varieties are *Baroness H. Schroeder*, blush; *Brilliant*, scarlet; *Conqueror*, orange-vermilion; *Favourite*, satiny rose; *Jasminiflorum carminatum*, rich carmine; *Luteum roseum*, pink, suffused light yellow; *Ne Plus Ultra*, crimson-scarlet; *President*, buff-yellow, tinged pink; *Primrose*, pale yellow; *Princess Royal*, pink; *Purity*, white; *Scarlet Crown*, orange-scarlet; *Souvenir de J. H. Mangles*, orange, tinged pink. Hybrids of *R. multicolor* characterised by dwarfier habit and shorter

flowers are: *Ensign*, salmon-red, tinged scarlet; *Latona*, creamy yellow; *Mrs. Heale*, white; *Neptune*, scarlet; *Nysa*, orange-yellow; *Nestor*, buff, tinted rose; *Rosy Morn*, rose-pink; and *Ruby*, dark coral-red. Besides the above-mentioned there is a small group with double blossoms to which the name of *R. balsamiflorum* has been given, owing to the resemblance that the flowers bear to those of a *Balsam*. They were all raised by Mr. Heale from one flower which showed a tendency to become double, and being fertilised with its pollen produced a pod of seed which yielded such happy results. The double varieties are album, white; aureum, yellow; carneum, flesh-coloured; Rajah, fawn-yellow, tinted rose; and roseum, rose-pink, suffused with orange.

CULTURE.

These *Rhododendrons* are not at all difficult to cultivate, yet they are frequently met with in a far from satisfactory condition. This is often the result of keeping them in too low a temperature during the winter, for they generally occur in catalogues as greenhouse *Rhododendrons*, and the term greenhouse being a very elastic one, they are by some kept in a structure from which frost is just excluded, and



Rhododendron multicolor Mrs. Heale.

nothing more. Such conditions will suit the Himalayan hybrids, but those from the islands of South-eastern Asia require more heat, being best suited by what is usually known as an intermediate temperature, say a minimum during the winter of 50°. Their continuous blooming qualities, which have been often dealt with, result from their manner of growth, for they grow more or less throughout the year, and directly a shoot matures, a flower-bud forms at the apex, and after a time the blossoms expand. From this circumstance even comparatively small plants will have expanded blossoms, flower-buds in various stages of development, and young succulent shoots all at the same time. The *Rhododendrons* are not at all difficult to propagate from cuttings, which are best formed of the young shoots taken soon after they have lost their succulent character and before they are too hard and woody. Unless very vigorous, the entire shoot makes a suitable cutting, roots being readily produced from the slightly swollen base. The pots must be well drained and the compost (about equal parts of silver sand and peat) should be sifted through a sieve with a quarter of an inch mesh. The best place for the cuttings is a close propagating

case in the coolest part of the stove, where, if there is a gentle bottom-heat, they will soon root. When hardened off they may be potted singly, using about two-thirds peat to one-third sand, care being taken that the pots are well drained. As they get larger, the peat may with advantage be rougher, and a little charcoal about the size of beans added to the compost in order to keep it open and sweet. One thing to particularly bear in mind when potting these *Rhododendrons* is, that most of the species from whence these numerous varieties have sprung are in a natural state more or less epiphytes, and on this account dense masses of soil around the roots are very inimical to their welfare. Good fibrous peat, pulled to pieces by hand (not sifted), with a liberal admixture of sand and a little charcoal will suit even large plants. Some cultivators prefer an admixture of fibrous loam with the peat, but it is not necessary; indeed, I would rather dispense with the loam. The soil should at all seasons be kept fairly moist, but not too wet, while the syringe may be freely used nearly throughout the year, the only exception being during very cold, dull weather. While the numerous varieties are occasionally propagated by grafting, but more generally by cuttings, they can also be readily obtained from seed if one is inclined to wait a few years for the results. The seed is extremely minute, and must not be covered at all when sown. Well-drained pots or pans should be filled with sandy peat prepared as for the cuttings, and the surface being levelled and the soil well watered, the seeds may be sown thereon. A good place for them is a close propagating case as recommended for the cuttings, or, failing this, a pane of glass may be laid over each pot or pan in order to maintain an even state of moisture. Of course, the seeds must as well as the cuttings be regularly shaded. As the young plants make their appearance a little more air may be given by degrees, but they make more rapid progress if grown during their earlier stages in a stove temperature. The young plants when large enough must be pricked off into other pots prepared for their reception, and in time potted off singly. In addition to their desirable qualities above enumerated, these *Rhododendrons* possess others, for they are very rarely troubled by insect pests, though aphides at times attack the young shoots, but they can be easily kept in check, while in a dry atmosphere thrips are occasionally troublesome, but a liberal use of the syringe recommended for the welfare of the plants will prevent these pests effecting a lodgment on the leaves. Another point in favour of these *Rhododendrons* is the fact that they are little, if at all, affected by that bane of the plant grower around London, viz., the heavy sulphur-laden fogs, which play havoc with so many plants. As most of the varieties have originated at Chelsea, and Messrs. Veitch sometimes exhibit them nearly throughout the year, a good proof is given of their ability to withstand London fogs.

Some of these *Rhododendrons* have a tendency to run up tall, to obviate which they must be freely stopped during their earlier stages, but where this has not been done the plants may be cut back hard in the spring, for if kept close and freely syringed overhead young shoots will be pushed out from the old wood as readily as in an *Azalea*. Some of the varieties, too, will commence to flower as soon as the young shoots are but a few inches long.

T.

Notes from Baden-Baden.—*Delphinium scopulorum* is striking by the intensity of the

colour of its flowers, which is a glittering ultramarine. It forms a thick root and is a hardy perennial. *D. speciosum macranthum* from original Kurdistan seed has been much admired. It is a stately plant, 4 feet to 5 feet high, flowers deep blue and over $4\frac{1}{2}$ centimetres across in big spikes. *Patrinia hispida* is another desirable perennial; it grows to 2 feet and has large umbels of brilliant deep yellow flowers. *Campanula betulifolia* is a companion to *C. mirabilis* and bears numerous large white flowers. Among seedlings of *Lathyrus latifolius*, a variety has turned up having much larger flowers and spikes. It is much more showy than the type. A strong plant of *Coriaria terminalis* will soon be in great beauty; it has about ten fruiting branches. The robust *Richardia Adlami* is a first-rate novelty, its creamy white flowers having a black blotch extending over half the spathe. A new *Kniphofia* shows good quality; it is not a big plant, but is very free-flowering all the summer until frost; the flowers are sulphur-yellow below and reddish or red at the end of spike. I propose to call it *rufa*, red-headed; it is the most free-flowering I ever have had. My efforts to raise a double variety of *Scabiosa caucasica connata* (syn., *S. caucasica elegans*) seem to draw nearer to realisation, as a beautiful semi-double variety has now appeared. According to the construction of its flowers, I cannot expect to get many seeds, but if evolution goes on in the same direction our gardens will soon be embellished by a double variety.—MAX LEICHTLIN, *Baden-Baden*.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

VINERIES.—Vines which are forced year after year are naturally weakened in the process, and to obviate this as much as possible it is necessary to relieve them of their crop as early as may be, so that their energies can be devoted to finishing up the wood in good condition to go through the same ordeal next year. There are other reasons for early cutting. The Vines used for forcing are generally varieties the fruit of which soon loses its freshness, and in the case of black varieties the bloom disappears and leaves the berries of that red hue so objectionable both to the consumer and the producer. An early clearance gives a chance of syringing and cleansing the foliage, which if well preserved will then ripen off naturally and plump up the buds to which the shoots will eventually be pruned back. If the sub-laterals have been allowed to grow wild during the past few weeks, cut them away to admit all the light possible. Where the fruiting laterals were allowed to grow beyond the orthodox two joints from the bunches, these, too, may be lightly shortened with advantage, especially where the rods are rather close together. Keep the ventilators open night and day, for, given a fair amount of sunshine, the more natural the conditions under which the wood is finished up the better will be the prospects for next year, and to this end also the borders should not be allowed to get dry. It is certain that the under-sized bunches which one so frequently sees in early houses are partly the result of ripening up the growth too early in the season. In midseason houses the Grapes will now be either ripe or fast approaching ripeness, and as some of these must perforce be left hanging for a considerable time, care will be necessary to keep the atmosphere dry and buoyant. Damping down must be suspended entirely or reduced to a very light sprinkling during the forenoon of bright days, and air should always be on the top ventilators at least. Bottom ventilation, being governed by the state of the weather, is not advisable when the air is muggy or in case of rain or high wind. Should wet weather prevail day after day, a little fire-heat must be used during the day to dispel the dampness, but it should be suspended by night, when it would do more harm than good. It really takes very little fire-heat to keep the atmo-

sphere of a house with a fairly rain-proof roof in a sufficiently dry condition to preserve the Grapes from harm—that is, when the ventilators are well managed—and more than this only encourages shrivelling. Look well through the bunches once a week or oftener, according to the weather, and remove any berry which shows signs of damping or which has been injured in any way, as one bad berry will soon taint a whole bunch.

POT VINES.—As these take on the appearance of ripening the wood to the full length of cane which will be allowed to remain at pruning time, more air should be given so as to gradually prepare them for removal to the open when the season's growth is actually completed. Except in the case of pot Vines which are in a backward state, fire-heat may be dispensed with almost entirely, as Vines well forward now will have plenty of time in which to finish up well. Keep the roots in good condition as to moisture, but do not water too freely, or continue to feed the roots over-much, as a firm cane, even if on the small side, will produce a more satisfactory crop than a large, but soft one.

STRAWBERRIES.—The runners when once they have become fairly well rooted in their pots should be cut away and moved to a position where they will be shaded from the mid-day sun, and stood thickly together for the first few days, as the pots then prevent each other becoming too hot and dry, and the young plants are thus inured gradually to the loss of sustenance they incur through being cut away from the parent plants. As they become able to bear it, it is advisable to stand them more thinly preparatory to potting them into their fruiting pots, which should be done by, or very soon after, the end of the month. In the meanwhile a good heap of soil should be prepared, thrown together, and turned over and over again to get thoroughly mixed. There is a gain in preparing the soil beforehand, as if it can be placed under cover and fairly moistened if too dry for use, the ingredients become better incorporated, and anything of a strong and burning nature which may be used will become toned down and harmless to the young roots. The conditions as to moisture also are greatly improved by mixing some days in advance, and those who have had much Strawberry potting to do will readily agree that on the exact condition of the soil in this respect depends a great deal both in the facility with which the work progresses and in the ultimate success with the plants, for soil that has to be damped just before potting never works well. The loam used for Strawberries should be fairly heavy, but with plenty of fibre in it. In such soil good crowns are made, and there is body enough left in it to swell up a crop of fine fruits. I do not advocate the use of much manure in the soil, but I like to give a fair sprinkling of Mushroom-bed manure or horse droppings which have become sufficiently decayed without having gone through the process of "making" in the Mushroom house. A little bone-meal, too, is helpful when the loam is on the poor side, but as a rule loam alone contains sufficient food to carry the plants on till the pots become full of roots, after which they may be fed with liquid manure. Bone-meal is lasting in its effects, so will retain its feeding properties as long as the plants remain in their pots; consequently it is better than any of the quick-acting manures. If the loam is very heavy, mortar rubbish should be added as a corrective and is safe. It is customary to add soot to the mixture, but this varies so much in quality as to be positively dangerous sometimes, even if used in very small quantities, and it is safer to use it through the medium of water in which a bag of soot has been steeped. I like to sprinkle a little on the crows before putting on the rough soil used underneath the ball, as there it is safe and acts as a worm-preventive. In potting, which should be carried out by the end of the month, see that the plants stand fairly high and that the crowns are not buried in the soil. Pot very firmly, finishing off with about three-quarters of an inch of space from the rims for water. Stand the plants after

potting in the shade for a few days, but do not leave them in shade longer than the time requisite to keep them from flagging after the shift, as they will require as much sunshine as they can get later on. If in good condition as to moisture when potted—an important item to look out for—they should require no water at the roots for a few days, but the syringe should be freely used upon them. Before potting, it is advisable to turn the young plants down on their sides and to syringe them thoroughly on the under-sides with water in which a good quantity of flowers of sulphur has been mixed. This will prevent both red spider and mildew, and is of special benefit to Royal Sovereign, which is always liable to attacks of the latter. CORNUBIAN.

KITCHEN GARDEN.

SECOND EARLY POTATOES.—The whole of these may now be lifted, sorted and stored away in the coolest place procurable. A shed or outhouse having a north aspect is suitable both for seed tubers and those intended for the kitchen. A warm south aspect storage induces loss of weight and quality in those that are to be eaten and shrivelling, coupled with unsatisfactory sprouting in spring. A good sized plot from which this crop has been lifted should now be set apart for early spring Cabbages, and if allowed to remain in a rough condition from now till a fortnight before planting takes place, a sweet condition will be ensured. Where the ground is liable to be infested with slugs in wet winters, it will be well to spread over the surface a good coating of lime and soot, afterward scuffling it in deeply with a fork. Dig and tread the plot well before planting, as a loose root-run, especially in light soil, is not conducive to a growth suitable for standing a severe winter.

YOUNG CARROTS.—Those who have sown small beds as advised from time to time will have realised the value of them, as for soups and flavouring these young tender roots are far preferable to those older and more mature. If the grub has not yet attacked them, it will pay to give another good sprinkling of wood ashes, soot, or burnt garden refuse between the rows, following it by a good soaking of water. Hoe between and hand-weed all young Carrot beds, and in cases where the dreaded grub has actually attacked the crop, procure a large tub capable of holding 100 gallons of water. Into this throw a bushel each of lime and soot, stirring it well round and allowing it to stand for a night. The following day well water the Carrot bed with a rosed watering pot. This will exterminate the pest and promote a healthy growth. Warm soft water is best for the purpose.

SPRING CABBAGE.—Some time ago I cautioned gardeners against making very early sowings of this important vegetable. I make my principal sowing at the end of July, the varieties being Ellam's, Cocoa-nut, Earliest of All, and Mein's No. 1. Provided good seed is used, it need not be sown thickly; in fact, thick sowing is ruinous. I make a second sowing from the middle to the 20th of August, good second early varieties being included in it. As a rule, Cabbage plants that are to be wintered in frames will be quite forward enough if sown at the beginning of September. If sown earlier, large, ungainly plants which lift badly and are prone to run to seed after flagging from removal in spring follow. Sow the red pickling Cabbage at the second sowing and also with the third for frame protection.

LETTUCE.—If another transplanting is now made of various sorts on good moist land, a supply for some weeks to come will be secured. A sowing of good Cabbage varieties may also now be made, which will come in most useful at a period when cooler nights and mornings favour long keeping. The latter do not run to seed so soon as the Cos varieties, and are profitable for growing in shallow, hot soils. When transplanting Lettuces make a slight drill, as then a little soil can be drawn into it around each plant after watering, this preventing evaporation and ex-

cluding parching winds from the roots until well established. In all cases where scarcity is apprehended it should be remembered that by leaving a percentage of plants on the seed-bed and keeping them well watered, Lettuce may be cut a fortnight earlier than from the transplanted rows. Any which have arrived at maturity may be lifted with care and laid in under a north wall, where they will keep for some time in an eatable condition. Of course, where other batches are coming on apace this is not necessary.

LATE-SOWN BEET.—I pointed out some time ago the necessity for a late sowing of Beet in places where this root is eaten by itself at lunch, as large roots are usually objected to for slicing up. If the final thinning has not been given, see to it at once, and keep the rows free from weeds and the intermediate spaces frequently hoed to promote a clean, sweet growth. The coarse varieties, which show white rings in their centres when cut, are not fit for salad, and, unfortunately, this drawback is present in three parts of the so-called table Beets. In case of an uneven plant, Beet does very well if carefully transplanted. I have seen beds which in the earlier stages of growth were very uneven present a perfect appearance later on by transplanting from the other rows. This is worthy of note, as many people might think the experiment worthless.

RHUBARB.—The erroneous idea is often entertained that in order to make the best jam and wine Rhubarb ought to be in a semi-withered condition. Those, however, who desire quality in either will do well to take the sticks which result from a secondary growth which occurs in most vigorous Rhubarb beds and is now at its best. Some varieties, too, are better for jam and wine-making than others, the small-growing Prince Albert and Hawke's Champagne making a delicious preserve. Any seed-stems should be taken off at once, so that the most may be made of the remainder of the season for strengthening and developing the stools for next year.

J. C.

ORCHARD AND FRUIT GARDEN.

FLAVOUR IN FRUIT.

WELL-CONSIDERED culture and careful attention, especially just previous to the finishing stage, have a lot to do with flavour or the want of it in the fruit we grow under glass. In the open we are, of course, entirely at the mercy of the season, and only in certain small details can anything be done to improve the quality when grown. For instance, in the case of Strawberries that have not to be packed, but sent direct to table, there are a few kinds, notably Sir Joseph Paxton, that are much improved by an hour or two in a warm, dry fruit-room or house. Gathered overnight and placed in a vinery where ripe fruit is hanging, this and Royal Sovereign are greatly improved both in colour and flavour by the morning, but nothing that can be done to these varieties can bring them into the first rank for flavour. That handsome Strawberry Monarch has been off and on decried and praised as to quality. I find it rather peculiar, and though it sounds almost impossible, I have always had better-flavoured fruit in a wet season and after a wet time than when opposite conditions prevail. Again, Latest of All and Waterloo have proved of much better quality when grown in a partially shaded aspect than on a bed quite exposed to sun. I think that the want of colour at the tip of the former and some other kinds is always worse when the fruit is hurried along.

But, as I have noticed frequently, what helps us one year fails or hinders in another, and I am looking forward to better coloured, if not better flavoured, fruit of this kind this season, as it has come along more slowly than

usual. Hot sun, with little moisture, is, I am sure, as frequently the cause of deterioration in quality and premature ripening as the opposite conditions are of watery and insipid flavour. Hot, burning days, with bitter cold winds at night when the fruit is forming, constitute a severe strain upon the plant, and cannot do otherwise than hinder the proper development of the fruit, but moister conditions, even if cold, keep the berries swelling gradually, though slowly.

I do not know what is the condition of things generally, but, speaking from my own experience, the present has been a very trying spring for fruit forcing under glass, and the quality of Peaches especially is much below the average. Alexandra Noblesse, usually one of the richest flavoured Peaches in the early house, is far behind its proper form, yet the trees have not been over-cropped, nor have they been hurried, as the house was started at the new year and the fruit is just ripe (July 1). Early Grosse Mignonne is better, but this is an end tree, and has therefore the sunniest and best position, the trees being trained across the house. Even this fine variety is not, I think, quite so good as usual. We have had much less sunshine than usual this year, and this in part doubtless accounts for the lack of flavour. Under these circumstances it is pleasant to turn to a brighter side with the Vines. As long as the right varieties are grown and properly finished there need be little fear on the score of quality. That excellent black variety Madresfield Court is splendid this season. It is a Grape that requires good culture, and to bring out its best points not less than six months' growth from the date the house is closed till the fruit is ripe. This prevents undue haste at any time, and splitting and other evils are more likely to be avoided than if the crop is hurried before stoning is properly finished.

H.

Wall breaks.—On page 420 (last vol.) "A. D." refers to what I should consider an invaluable provision for exposed positions in the form of wall breaks. Would not wind breaks be more descriptive? I have long since wished I could erect such breaks against a wall here having a southern aspect. The projecting walls could be profitably utilised for Morello and dessert Cherries or Plums, but the cost of erection is a barrier. Outdoor Peach growing might be made more easy, because cold cutting draughts, which are so fatal to the tender leaves, would be removed. I have never seen any but the ordinary strengthening buttresses erected, but there are undoubtedly cases where the extra expenditure would be both justifiable and profitable. The need of such is more keenly apparent in gardens of large size where there is a considerable length of unbroken surface of wall. There would not be the same advantage derived from wind breaks on east and west walls as from the south unless they are devoted wholly or in part to such tender trees as Peaches, Apricots, or Nectarines. Plums and Cherries would scarcely justify the expense except in cases where the additional wall space may be required.—W. S.

—I was interested in "A. D.'s" note at page 420 on the wall breaks in the garden at West Hall, Byfleet. One seldom meets with them, but I was employed in two gardens where they existed. In one they were exactly the same in character as those mentioned by "A. D.," having no doubt been built at the same time as the principal wall which was intended for Peach trees. In the other garden they were only of a temporary character, being erected every year by the gardener on the border of the 12 feet high Peach wall. Stout poles and cross rafters were fixed, and the latter furnished with Laurel and Yew boughs. It meant a good deal of trouble, but it was astonishing how it screened the trees from cold, cutting east and west winds while in

flower and until a fair amount of growth was made. These breaks were also of great advantage to early vegetable crops, such as Potatoes, Cauliflowers and Peas, which are more often injured by cold winds than frost. Of course they are not very ornamental, but utility is generally the first thing considered in fruit and kitchen gardens.—C.

STRAWBERRIES IN THE OPEN GROUND.

THE unfavourable weather during the early part of May played sad havoc with the Strawberry bloom in this district, especially with the more forward kinds that had but little foliage. Here on several occasions there were sharp frosts, and on the night of the 5th we registered 7°, which so took hold of the flowers that scarcely one that was expanded escaped. Scarlet Queen, Royal Sovereign, John Ruskin, and others that do not grow so strong on our soil are almost a failure. Some of the later ones, however, escaped, and these are promising. As yet (June 24) I have not been able to gather a fruit from outside, and were it not for a batch of Leader grown in a cold frame I should have been without fruit at the present time. This is unusual in this part of the country, as often the greater portion of the more forward kinds has been gathered. Leader is a grand variety, and in my opinion one that has come to stay. Here on a north border the crop is a heavy one, the flowers not being sufficiently forward in that shaded position to come to any harm by the severe weather. Monarch growing alongside has not half the crop, both being planted at the same time and treated in like manner. In this position Scarlet Queen, too, has suffered less than in the open or on sunny borders, as the blooms were not so forward. Mulching had somewhat to do with the frost taking so much hold of the blooms, for where the ground was not mulched the plants suffered less. While on this subject, may I ask if anyone has ever noticed that the material used causes a difference in the temperature round the plants? Most gardeners experience a difficulty in procuring suitable material for this purpose. Grass from the lawn goes too close together, therefore holds too much moisture for the well-being of the fruit should the weather be damp at the time of ripening. Oat straw, without doubt, is the most useful, particularly if from a farm that is well tilled, as there are then but few weeds of any kind introduced. I noticed that where peat Moss manure was used as a mulch, plants suffered more than they did where there was no mulch at all, and where clean straw was employed less harm was done than with grass. Gardeners in some places are placed at great disadvantages in not being able to procure articles they require, and this is one of those which often puzzle them, particularly where there is no home farm and where the stables are of limited extent. To send Strawberries in the finest possible condition to the table under such conditions entails both a lot of trouble and expense, for where the ground has to be mulched with unsuitable material it is always best to run a piece of bast or raffia round the plants to loop up the fruit.

H. C. P.

Gooseberry Telegraph.—Although at first sight this appears to be a good deal like Berry's Early Kent, it is quite distinct and better in flavour, though not so good in appearance. The berries are very large, but of a clouded green tint when fully ripe, and it is one of those Gooseberries that can be over-ripened. If caught at the right time it is delicious. The tree is a strong but dwarf grower, and makes less headway in a plantation than the kind with which I have compared it. It is good under any form of training.—H. R.

Gooseberry Keepsake.—There is a disposition among growers to decry the larger varieties of this luscious fruit on the score that the quality is poor, but however true this may be of some kinds, it is a libel on others, Keepsake included. It ripens early, forming a good succes-

sion to the Rough Yellow, and is of immense size. The thin, almost transparent skin is pale green with deeper reticulations and less hairy than that of most kinds, while there are ample pulp and few seeds. It is altogether a first-rate kind and a useful addition to the dessert in August. Grown on wire trellises I have an immense crop of fine fruit.—C. H.

Strawberry President.—I am obliged to "West Middlesex" for his reply to my note on this Strawberry, and very glad to hear it is still so largely grown in his neighbourhood. His note bears out my contention that there must be something wrong in the cultivation where it fails, for unless it has deteriorated since I grew it, there are few better. When in the west of England recently, a friend of mine who grows Strawberries rather largely told me he had quite discarded it in favour of the newer kinds, of which Royal Sovereign is a typical variety, and, as I said in my note, I have heard very numerous complaints about it as a forcing kind. I shall try it again this season, but I am afraid in this cold, ungenial soil it will not show its true character. I have some old rows of it in company with Waterloo, as I thought it might improve by being left on the ground, but the growth is weak and the foliage yellow, while the fruit is not at all like the large fine-flavoured berries I have always expected from President. The grower mentioned above used always to leave it on the ground for several seasons, but this was before the plan of clearing off early was so popular as now. Another very useful kind I have lately tried and found wanting is Keens' Seedling.—H. R.

INSECTS AND STRAWBERRIES.

SLUGS and other insects have been very destructive to the Strawberry crop in this neighbourhood, much more so than usual. On one or two occasions it has been really difficult to gather any quantity of fruit without having some blemished ones among them. This is all the more vexatious, as there has been such a splendid crop of large handsome berries. Royal Sovereign has in this neighbourhood been badly attacked by some insect that hardly touches the flesh, but simply eats off the seeds from the outside. I have not noticed that any other variety has been attacked in a similar way, but this kind is picked out from among rows of other kinds. Naturally the appearance of the fruit is much marred, and if any correspondent of THE GARDEN has noticed the same thing in other localities it would be worth mentioning. Even before the fruit is really ripe the seeds disappear, giving the fruit a dull look and of course rendering it quite unfit for dessert. In conversation with a grower on rather a large scale at Sudbury, he attributes the attack to some small insect of the mite order, but I have looked over my rows time after time and can see nothing except a few millipedes, and of course slugs and small snails, and all these marauders were, I think, more active inside the fruit than out. I have looked at night as well as by day, but as yet I am as far from finding out the cause as ever.

Respecting the use of various kinds of litter, I find it makes little difference whether clean straw or that from the stable is used. The slight manurial value of the latter is not worth considering, and if put on early enough to be blanched by rain I find that the slugs can get about on it as easily as on clean wheat straw. Again, the longer the ground between the rows lies open the better, as the moisture caused by the litter is an attraction to slugs. Anything in the way of grass mowings is the worst of all, and I would never use it if I could get good clean straw. When taking layers from a fruiting bed it will be found an advantage to twist the straw into stout bands and lay one of these

round each plant. This not only gives more room and better standing for the pots, but the flower-trusses are lifted clear of the ground out of the way of insects. A little practice soon makes the men adept, and the work then takes less time than strawing the whole of the ground, also using less straw. H. R.

Suffolk.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 442, last vol.)

BEURRÉ D'AMANLIS (synonyms, *Delbart, Hubart, Kainsoise, Thaissoise, Wilhelmine*).—As to its origin, M. Jamin (J. L.) found in 1865 the mother plant existing in an orchard at Amanlis, near Rennes. The fruit is fairly large, pyriform, most frequently taking the Bon Chrétien shape. The stalk is short, of normal stoutness, rather curved, set in a small cavity made irregular by a protuberance which is ordinarily very marked. The eye is fairly large, closed or half-closed, irregular, and not deeply set. The skin is a pale green stippled much with grey, sometimes coloured dark red on the sunny side. The flesh is yellowish white, green beneath the skin, melting, juicy, more or less aromatic. A very good or fairly good fruit, ripening in September. The tree is very vigorous on the Quince stock as well as on the natural stock, and very fertile. The branches are thick, long, and bent, greyish red in colour. In cultivation this variety comes well in all soils.

BEURRÉ D'ANGLETERRE (syns., *Bec d'oie, d'Amande, d'Angleterre, de Finois, Gisambert*).—Of ancient and unknown origin. The fruit is smallish, almost medium-sized, regularly pyriform, narrowing almost regularly to the point. The stalk is of variable length, curved, set in the point, and sometimes turned aside by a spur. The eye is large, open, regular, the sepals very short, projecting from a slight depression. The skin is delicate, but rather rough, a light yellow-green, stippled with numerous small brown dots, and often marked with tawny streaks. The flesh is white, rather greenish under the skin, delicate, soft, melting, juicy, more or less aromatic according to locality and season. A good or fairly good fruit, ripening September and October. The tree is of feeble vigour on Quince, very vigorous on the natural stock; of great fertility. The branches are stout, short, spread out and much elbowed. This variety is most suitable for orchards, where it quickly forms a pyramidal and compact head, and bears very freely.

BEURRÉ D'APRÉMONT (syns., *Beurri Bosc, Beurri de Humboldt, Cannelle, Carajon de Bosc, Paradis d'Autonne*).—Discovered in the forest of Aprémont (Haute-Saône) about 1835. Grafts sent to the Jardin des Plantes of Paris produced excellent fruit, and the variety was dedicated to Bosc, although in its native country it still kept the name of Aprémont. The fruit is large or fair sized, a long calabash or pear shape, humpy and swollen at the top, contracted in the lower half and ending in a blunted point. The stalk is longish, woody, straight or curved and set in a small crease. The eye is medium sized, half closed, set in a narrow and shallow and rather wrinkled cavity. The skin is citron-yellow, stained with cinnamon and rather rough, having a pronounced general tint on the sunny side. The flesh is white, delicate, melting, juicy, pleasantly aromatic. A very good fruit, ripening October—November. The tree is of normal growth upon Quince and great fertility on any stock. In cultivation this variety is difficult to control in obtaining regular forms. As a standard on the natural stock it forms a spreading head and quickly becomes fertile.

BEURRÉ DE LUÇON (syns., *Beurri gris de Luçon, Beurri d'hiver, Beurri gris d'hiver nouveau*).—Found in the neighbourhood of Luçon (Vendée), more precise data are wanting. The fruit is large or fair sized, irregularly rounded, generally more swelled on one side than on the other. The stalk

is stout, short, woody, in a broad, shallow and irregularly sided cavity. The eye is small, open, set in a shallow wide cavity, surrounded by obtuse bumps. The skin is not thick, but firm, a grey-green, covered with wide tawny streaks and whitish stipplings, and tinged with light red on the sunny side. The flesh is rather greenish-white, delicate, melting, and aromatic. A good fruit, ripening December—January. The tree is of sufficient vigour on Quince and normal vigour on the Pear; is of great fertility. In cultivation this variety has a tendency to fall and should be trained on a wall.

BEURRÉ DE NIVELLES (syn., *Beurri Parmentier*).—Obtained about 1840 by M. François Parmentier at Nivelles, in Belgium. The fruit is medium or fair-sized, wider than high. The stalk is rather long, slender, curved, set in a narrow shallow cavity and often seamed. The eye is small, often closed, and set in a narrow and shallow cavity. The skin is olive-yellow, spotted and streaked with brown, and broadly marked with a bright red-brown on the sunny side. The flesh is yellowish, melting, juicy and aromatic. A good fruit, ripening December to February. The tree is of sufficient vigour on Quince and of great fertility. In cultivation this variety should be grafted on the Pear, and lends itself well to vase forms or large nailed-up palmette forms.

BEURRÉ DE HARDENPONT (syns., *Beurri d'Arenberg, Goulu Morceau, Beurri de Kent, Beurri Lombard*).—Obtained in 1759 by Nicolas Hardenpont on his property of Mont Panisel, near Mons, Hainaut, Belgium. The fruit is of large or fair size, oblong, lumpy, with the form of the Portugal Quince. The stalk is stout and set in a shallow cavity. The eye is open or half open, inserted in an irregular ribbed cavity. The skin is fairly smooth, pale yellow, often yellowish grey-green, stippled grey, washed with tawny at the top and base. The flesh is white, fine, close, melting, very juicy and pleasantly aromatic. A very good fruit, ripening November to February. The tree is vigorous and fairly fertile. The branches are stout, straight, olive-brown shot with ash colour, and covered with very numerous grey lenticelles. The buds are medium sized, short, and at a distance from the branch. In cultivation this variety does well upon Quince and the natural stock, is suitable for all forms, but prefers espalier in a good exposure. The Belgians say that on the natural stock its fruit is much improved.

BEURRÉ DIEL (syns., *Beurri Magnifique, Beurri Incomparable, Beurri des Trois Tours, Beurri Royal, Grosse Dorothée, Melon*).—Found at the commencement of the century on the farm of Trois Tours, near Vilvorde, Belgium, by Meuris, gardener to Van Mons. The fruit is large or very large, obtuse, sometimes as wide as high. The stalk is shortish, stout, swollen at the point of attachment, slightly curved, set rather obliquely in a middle-sized cavity. The eye is medium size or fairly large, half closed, set in a deep, fairly wide cavity, ribbed on the edges. The skin is rather rough, a citron-yellow, much stippled with russet and marked with tawny stains round the stalk and the eye, rarely dashed with a little dark red. The flesh is white, half delicate, half melting, very juicy sugared, acidulate (often too much so), and aromatic. A good fruit, ripening November and December. The tree is vigorous and very fertile. The branches are thick, of medium length, curved, russet colour, with oval grey-brown lenticelles: the eyes large, conical, and distant from the branch. In cultivation, this variety may be grafted upon Quince or upon Pear. It lends itself to all forms of training.

BEURRÉ DILLY (syns., *Beurri Delannoy, Poire de Jollain*).—Obtained about 1848 by M. V. Dilly, a tradesman of Jollain, near Tournay, Belgium. The fruit is of fair size, often almost as wide as high. The stalk is of medium length and slender, swollen at the point of attachment, curved, set obliquely in a shallow, slightly ribbed cavity. The eye is large, half closed or open, set in a fairly wide, shallow cavity slightly ribbed at

the edges. The skin is rather thick, slightly rough, a dull greenish yellow, tinged with dull red on the sunny side, stippled with grey, and washed with tawny round the stalk. Flesh white, slightly greenish, delicate, and melting, juicy, and agreeably acidulate and aromatic in the manner of *Beurré Gris*. A very good fruit, ripening September—October. The tree is of normal vigour and very fertile. The branches are stoutish, short, rather elbowed, a red-brown with small and whitish lenticelles; eyes medium-sized, conical, rather distant from the branch. In cultivation this variety is of good vegetation, and lends itself to all forms.

(To be continued.)

APPLES IN HEREFORD.

I HAD intended to send a note on the subject of the prospects of the Apple crop a week or so ago, but thought it expedient to wait and see how the fruit developed before reporting thereon. Since then the effect of the intensely hot weather we have been experiencing in the west midlands for the past fortnight has been to influence the growth of the fruits on the Apple trees to a marked degree, so that one can now speak with confidence. Apples which a few weeks ago had barely set or only just begun to swell have grown very rapidly, and even the very latest flowering sorts, such as *Court Pendu Plat* and *Sturmer Pippin*, have fruits of a good size on them. The earliest sorts of all, particularly the *Codlins*, such as *Lord Suffield*, *Keswick Codlin*, and *Potts' Seedling*, are, as may be expected, in a very forward condition for the time of the year, owing, of course, to the forcing nature of the weather. It may be noted in passing that the trees when in bloom had to pass through a rather severe ordeal, as, in addition to there having been frost on several occasions, the wind was most of the time cold and the weather ungenial. As usual in this county, the effect when the trees in gardens and orchards were in full blossom was a fine one, and it well repaid anyone to take the trouble to ascend one of the many hills situated hereabouts for the express purpose of viewing the beautiful picture there presented. Hundreds of acres of orchards were then to be seen, forming beautiful pink and white masses of colour in the landscape, and this not only close at home, but as far as one could see in all directions. I do not remember the blossoming to have been more profuse, and one heard this remark passed on all hands. This is the more remarkable seeing that the trees in the majority of cases carried such heavy crops last year. No doubt we have the fine dry season to thank for this, the wood and fruit-buds in consequence having been so thoroughly matured. The latter were so unusually plentiful, that the wood on trees both young and old fairly bristled with them. The blossoms, it may be remarked, were extremely vigorous and bold looking—always a good augury for a free set—and, what was more, the trees developed a great deal of leafage before and while the buds were opening. Some hold the opinion that when the foliage develops while the blooms are as yet unfolded, or while they are expanding, a good set never results, as an undue proportion of sap is drawn for the support of the leaves which would otherwise go towards nourishing the blossoms and embryo fruits. According to my own observations, but little importance is to be attached to this statement, for last year and on many occasions previously the same thing has happened, and that without the crop being in the least affected. Next comes that important matter which so exercises the minds of all fruit growers in the spring months, viz.,

INSECTS.

I hear of some complaints, but, on the whole, the verdict in this district is that the trees are cleaner than they have been for several years past. By this I do not mean to infer that the trees are free from them altogether, but still one can drive along the main roads and see trees not looking as though they had been riddled with

sparrow shot and in some cases almost defoliated. This is, of course, a matter for congratulation, but it is to be hoped that it will not lull growers into a sense of false security and lead them to imagine that because insects are not so numerous this season, they should relax their efforts in coping with these pests both now and again in the autumn or winter. Personally speaking, I cannot present a clean bill as regards the trees here, but must say they have given less trouble this season than they have done for years. Red spider is present and has been on a few trees, also American blight. The Apple mildew is, I fancy, rather more in evidence this year than usual, as I have noticed it in a great many orchards and gardens the last few weeks. Although not so destructive as caterpillars, it is sufficiently debilitating to the constitution of the tree to call for special means being taken to eradicate it as far as possible. I have also noticed that the brown fungus or mould on the leaves of Apples, which was so prevalent last year in many parts of the country, is still with us, but only to a very limited extent. Of course, we do not yet know to what extent the fruits may be affected by the larvæ of the *Codlin moth*, but so far they look healthy and sound enough. Some growers complain of the Apple cherries or Apple suckers being troublesome, but up to the present I have seen none on the trees here. The Apple-blossom weevil, too, has done but little mischief; in fact, according to my own observations, but few blossoms were infested. I have found a nest or two of the caterpillars of the small ermine moth (*Yponomeuta padella*), but beyond these two instances no more are to be seen. So, taking it altogether, insects which affect Apple trees are, for once, very much less numerous, and in my case this should be so, seeing that no efforts are spared in endeavouring to reduce their numbers throughout the season.

Within the last fortnight trees carrying good crops of fruit have received a fair dressing of manure in the form of chemicals, which has been hoed in in the absence of rain to wash it in. This is of wonderful assistance to the trees, as it keeps them growing and enables them to swell their fruits to a larger size than they would do if left unaided. Liquid would of course be of great benefit when it can be spared and had in quantity, but its application entails more labour at this busy season, while the use of artificial best suited to the Apple and to each particular kind of soil can be applied at very much less cost and trouble. The trees here will have another application of manure when the fruits are about half grown, and this will be sufficient to carry them through. A few hours' steady rain would do the trees an immense amount of good, both in cleansing the leaves and in moistening the soil beneath them, but according to appearances the wish will not at present be realised.

To sum up, the general outlook then as far as the Apple crop is concerned is a bright one, and, judging by present appearances, the yield will be quite as heavy as that of last year. It is pleasing to see old and well-tried sorts such as *Stirling Castle*, *Warner's King*, *Potts' Seedling*, *Ecklinville*, *Ribston*, *Lady Henniker*, *Northern Greening*, *Lord Grosvenor*, *Lord Suffield* and many others still to the fore as being regular and consistent croppers. Many sorts added to the collection of late years will also afford an opportunity of putting their merits to the test this year.

A. WARD.

Stoke Edith Gardens, Hereford.

Cherry Late Duke.—I have heard *Late Duke* spoken well of for growing in bush form worked on the *Mahaleb* stock, and those who intend planting would do well to give it a trial, as comparatively few varieties give satisfaction so grown. I know from experience that *Late Duke* possesses a capital constitution and will succeed and fruit freely in backward districts if given a wall. Gumming, which injures so many *Cherries*, seems to affect *Late Duke* but little, and even in a light soil, if mulched and occasionally assisted

with liquid manure, the fruit swells to a good size, is of a bright red colour, hangs well and is brisk and pleasant in flavour. An east or north wall suits it well.—N.

Insecticides.—The value of pure water alone in cleaning trees and plants of insects has been well demonstrated by the recent rains, and there is great benefit resulting. What it is thus possible for the rain to do so well may be done with clean water and the syringe, or, better still, force pump, on many things, especially when rains do not prevail. But very much in the direction of cleansing all trees and plants may be done when some simple insecticide is gently syringed over the insects so as to embarrass and clog them, even if not for the moment destroying them. The material, even if it be but soft soap and quassia chips in solution, helps very much to weaken the pests, and then after a few hours of this treatment a thorough washing with clear water effectually disposes of them. Of all trees, wall-trained ones are the greatest sufferers, and these should, because of the rebound furnished by the wall to the projected water, be all the more readily cleansed.—A. D.

Peach Salway.—Although a very fine, handsome-looking Peach, this is not a good variety for private gardens, the flavour when grown in an unsuitable position being very bad, while even in the warmest positions out of doors it ripens too late to get any flavour. The best *Salway* I ever tasted was grown in a mid-season house started at the new year and brought along slowly, but there are many better Peaches at that time, and the principal recommendation *Salway* has is its lateness. In a west of England garden I had it in an unheated house, and with it were *Sea Eagle*, *Prince of Wales*, and a *Nectarine*. The fruit from all these was over before the shooting season had far advanced, but that of *Salway* was often good at the first of October, when naturally it was very useful. The flavour grown thus is far before that of the best out-of-door fruit, and, taken all round, I consider it is the only way that *Salway* is really worth growing, unless under very exceptional circumstances. In many gardens where Peach culture on walls is remarkably well carried out, and other kinds do well and come well flavoured, this either does not ripen, or else when ripe it is poor and watery in flavour and woolly in texture.—H.

GRAPE GROS GUILLAUME.

THIS Grape is not so popular as many others on account of its habit of not finishing properly unless very carefully and well grown. Some consider it an exhibition Grape pure and simple, but as a matter of fact where it succeeds it is a very useful kind for home consumption, and when well ripened late in the season quite equal, if not superior, to *Lady Downe's*. Like *Gros Colman*, it needs a long season to be good, and cannot be rushed along like *Black Hamburg* or even *Madresfield Court* to finish early in the season. If started at the new year it would not be properly ripe before the end of August under ordinary conditions of culture, and from then to the middle of November is undoubtedly its season. Pruned long, *Gros Guillaume* throws large loose bunches that may or may not fill out properly at the shoulders. If by good feeding and careful manipulation they do so, grand bunches result, but the grower of such must beware of how many he leaves upon his rods, for a very few such will constitute a more severe strain upon the Vine than what appears a very heavy crop of smaller bunches. It is better in the ordinary way to prune rather close and be content with smaller bunches, which are usually more solid and preferable in every way, excepting, of course, for exhibition.

Very short or close pruning, on the other hand, will not do for this variety. It should be pruned to a good plump eye. When thinning bunches of *Gros Guillaume*, those who are not acquainted with the variety often make the mistake of thinning the shoulders too much and the

lower part of the bunch too little. The former being in most cases longer than those of most kinds, yet distinct from the long, stiff shoulder characteristic of Gros Colman, they can be tied out all round and a very fine bunch built up. If too much thinned this upper part will be loose, while the waist of the bunch, owing to the berries having less room, will be tightly packed. Being a very vigorous grower, Gros Guillaume is often inarched upon a weaker growing kind, such as Black Hamburgh, but this is not absolutely necessary. The foliage in autumn takes on very beautiful russet and red tints, and for this reason is much in request for dishing up other fruit upon. This must not be carried to excess, or the Vines will be injured.

EFFECTS OF THE STOCK ON GRAFT.

In the *Country Gentleman* we find some remarks on grafting which show more than usual observation of the effects of the stock on the scion, and are otherwise of interest to fruit-growers although written from observation in American orchards:—

1. **DWARFING.**—If the stock is a much slower grower than the scion, it may reduce the whole tree in size. Pears grafted on Quince and common Apples grafted on the dwarf Paradise stocks are the most common instances. In certain cases, especially in top-grafting old trees, the slower growing character of the stock does not seem to have so much effect in dwarfing the top. Common varieties of the Apple, like Yellow Transparent, King, or Fameuse, when grafted into Crab tops are not visibly dwarfed. Instead, they overgrow the stock. Frequently they become so top heavy as to break down of their own weight combined with stress of wind and fruit crop.

2. **COLOUR OF FRUIT.**—The stock sometimes modifies the colour of the fruit borne on the scion. Two cases have recently come to the attention of the writer. In the first, McIntosh was grafted on Siberian Crab, with the result of making the fruit much richer red and darker coloured. The trees from which the scions were taken grew directly beside the Crab trees in which the grafts were set, so there could have been no mistake in the observation. In the second case, Rhode Island Greening was grafted on Talman Sweet, with the result of making the Greenings lighter coloured.

3. **FLAVOUR OF FRUIT.**—Likewise the flavour is sometimes affected. In both cases cited above this was true. The Greening on the sweet Apple tree was said to have a sweetish taste. The McIntosh on the Crab stock had a more sprightly acid flavour. The latter case was thoroughly investigated by the present writer. Cases of this sort are not rare; but results of this sort are not sufficiently pronounced to be worth working for.

4. **MATURITY.**—The season of maturity is occasionally modified. The McIntosh Apples on the

Crab stocks kept a full month longer than those from the next row growing on common Apple stocks. Bailey cites the case of Twenty-ounce Apples, which ripened earlier when worked on Early Harvest; also of Winter Nelis Pear, which ripened earlier when grown on Flemish Beauty stocks than when grown on Bloodgood.

5. **ADAPTATION TO CLIMATE.**—It has been found in Iowa, Quebec, Vermont, and other semi-arctic countries that comparatively tender varieties of Apple, like Greening, King, and Baldwin, can be grown from 100 to 200 miles further north when top-grafted on such "ironclads" as Hibernial, Duchess, or even on Talman. A limited experience seems to show, on the other hand, that certain European varieties of the Pear can be grown further south when worked on such hybrid stocks as Le Conte, Garher, and Kieffer.

6. **ADAPTATION TO SOIL.**—Plums for light sandy lands should be worked on Peach; for very low, wet lands in the South they may be worked on



Magnolia Lenné at Enys, Penryn, Cornwall. From a photograph sent by Mr. Prestley Hogbin.

Chickasaw stocks; for heavy, cold soils in the North, Americana stocks are best. Peaches for heavy land are best worked on Plum.

The plague of caterpillars.—It was, I think, generally expected that after the extremely mild winter fruit trees would suffer greatly from insect pests. In passing through the principal fruit-growing districts of Kent I have been struck with the ravages caused almost everywhere by the larvae of the small ermine moth, and in some places they have almost defoliated the trees. This pest is easily distinguished by the web that is formed at the tips of the shoots, where the ravenous caterpillars feed on the succulent leaves and tips till full grown, when they fall or let themselves down to the ground. Both Apples and Plums have been swarmed with the pests,

and now that the caterpillars are gone, the brown and seared tips of the leafless shoots point plainly to their late residence. Strangely enough, the majority of market growers make no effort to destroy the pests, though much damage can be averted by syringing with paraffin emulsion.—H. H.

Flavour in Strawberries.—When recently exhibiting before the fruit committee a plant in fruit of their new Strawberry Veitch's Prolific to show its cropping qualities, Messrs. Jas. Veitch and Sons also sent a box of fruits for tasting. It says a good deal for the excellence of the variety that every fruit soon disappeared. But an odd objection was made to the flavour by one member, and that was that it possessed too much of the Hautbois flavour. So far from being an objection, I thought it to be a strong recommendation. But the general estimate was that without being unduly high the flavour was delicious, and in that respect alone, apart from its other high qualities, the variety is a valuable acquisition. The new Lady Suffield, shown at the Temple, I had an opportunity to taste with the rest of the fruit committee, but thought that, whilst very nice, flavour had to some extent been lost in transit. Perfume is not always a safe guide, because in fruits too much of it evident to the olfactory nerves seems to indicate some loss of it in the fruit through diffusion in the atmosphere. Melons that are delicious to the nostrils are too often otherwise to the palate. An older Strawberry of very high excellence in respect of flavour is Countess, that was recently in the great trial of varieties at Chiswick the very best in crop and in flavour. It is a variety that should be largely grown by all who prefer medium-sized, delicious fruits to those huge acid fruits that so many think to be the best Strawberries. Countess throws moderate leafage, and may be planted rather closer together than is the rule with ordinary varieties. Some few others merit wide culture because of their high flavour.—A. D.

TREES AND SHRUBS.

MAGNOLIA LENNÉ.

This is undoubtedly one of the best of the deciduous Magnolias and a variety of the white Yulan (*Magnolia conspicua*), but instead of being white the flowers of *Magnolia Lenné* are suffused with a delicate rosy purple. The flowers appear in great abundance and are sweet-scented. Being among the hardiest of early-flowering trees, *Magnolia Lenné* is a most desirable shrub. In Messrs. R. Veitch and Son's nurseries at Exeter and Exminster there are several good-sized trees which have flowered abundantly and are growing in ordinary loam mixed with a little peat. The illustration is from a photograph of a plant in the grounds of Mr. Enys, at Enys, Penryn, Cornwall. Regarding this particular tree, Mr. Prestley Hogbin (who has charge of the gardens) informs me that it is growing on the west terrace in the company of Himalayan Rhododendrons and Camellias. The height is 20 feet, and it has flowered exceedingly well this year, lasting many weeks. In the autumn it always blooms a second time, and the flowers at that time of the year are darker in colour than the spring flowers. A *Magnolia stellata* planted close by produces yearly a complete mass of its beautiful white, star-shaped flowers. Among the Rhododendrons, which constitute the companions of the *Magnolia* here illustrated, are some grand plants raised from seed of *Rhododendron cinabarinum* var. *Roylei*. F. W. MEYER.

Elmside, Exeter.

Periploca græca.—This is a quick-growing ligneous climber that is quite distinct from anything else that we have in our gardens. It is a

good wall plant, but is even more suitable for clothing arbours, pergolas, and purposes such as this. The long, slender stems soon form a dense mass, and when furnished with foliage it is very effective and is then a good screen plant, but, being deciduous, it is of little use for this purpose during the winter. The flowers, which are freely borne about midsummer, are star-shaped, an inch or so across, and of a peculiar purplish brown tint. They are somewhat unpleasantly scented; therefore the plant should not be trained to the walls of a dwelling-house, but when growing loosely and, according to its usual custom, profusely laden with blossoms, it presents an attractive and uncommon appearance. It is readily propagated from cuttings.—T.

NOTES ON CURRENT TOPICS.

COLOURING GRAPES.—It is curious to observe how this subject continues to engross the attention of growers without, as the old farmer said to Sir Walter Scott over the claret, "getting any forrader." One feature in the colouring of Grapes I do not remember to have seen often noticed is the tendency of thoroughly well-coloured Black Hamburgs, ripened about midsummer, to turn about as thoroughly foxy as the worst examples of colour on Grapes that have never coloured at all. This very often happens in the case of crops that have to hang long on the Vines, even in the case of Vines in robust health and green foliage. What causes the colouring matter to disappear? Is it because the wood and leaves being matured the circulation has grown sluggish and the supply of colouring matter been arrested? That would imply that the colouring matter, like the chlorophyll of the leaves, is a circulating substance that may fluctuate in quality and quantity, and that when it is in abundance the Grapes are well coloured, and *vice versa*, just as the foliage becomes dark or pale green (anemic), according to the state of the sap and the supply of chlorophyll. The presumption is that when Grapes do not colour well in a soil that contains all the essentials to good health—and few borders do not—the cause is to be found in the state of health of the subject. Hardy varieties like the Alicante almost invariably colour well when the Madresfield Court, Mrs. Pince and Black Hamburg growing beside it are often red. West's St. Peter's is almost always of a deep black colour under similar circumstances, and so is the old Black Prince that Mr. Hill used years ago to exhibit at Regent's Park. One thing is certain, and that is that the Black Hamburg is the most erratic variety in respect to colouring of any, exhibiting every shade of colour from a reddish green to deep black, and that good colour is always associated with good green foliage and plenty of it, and absent when the foliage is poor from any cause, red spider being most to be feared. Once when among the vineyards of the north of France, where so much of the little black Grape is grown that produces the *vin ordinaire*, I could not help admiring the colour of the little bunches that hung on the Vines among the luxuriant leathery foliage and a tangle of laterals that a gang of women were hacking off in armfuls. The berries were thoroughly black without exception, just as the bunches of Chasselas de Fontainebleau on the open walls were golden. The advice of "H.R." to "very slightly increase the amount of air allowed" when the berries begin to colour is not quite satisfactory. The foliage and colouring agents cannot be maintained in a satisfactory condition if the life-giving air is not always supplied liberally. Neither do I believe that thinning the bunches very early—when the berries are like small peas, for example—does the

least good in the way of relieving the Vines. Physiologists hold, and rightly, that the green berries, previous to stoning, just fulfil the functions of leaves in the elaboration process. Up to that period the laterals grow quite rampantly, but when the critical stoning period arrives there is a distinct pause, and then the task of finishing begins; but if the colouring agents have not accumulated before, then no amount of air will put them there, and if the Vines are overcropped under artificial culture, these agents are sure to be deficient.

THE SPARROW: HOW TO DEAL WITH HIM.—Our friend the sparrow may be fed on insects during the couple of weeks or so of childhood that he remains in the nest, but the moment he leaves there he also leaves the insects and grubs and becomes a denizen of the bushes near the yard where the fowls are fed, and he stays there patronising the feeding trough from early morning till it is nearly dark in the evening. He is a thoroughly demoralised bird with all the vices of civilisation as far as he can acquire them. When he leaves the fowl's, pig's, or dog's feeding-dish it is to carry on operations in the garden. I cannot say that he is such a very bad bud-eater. The silent bullfinch is the arch-offender there. I have known two or three of these birds destroy the whole crop of Currants on a long row of bushes in a short while by eating the buds when they were just swelling and soft and eatable. It is a curious and providential circumstance that he rarely takes the terminal bud, for if he did the shoot would be killed; but he will alight on a shoot and in the most methodical way will pick out each bud alternately to the bottom. The sparrow is a "seedsman." In the garden where I am staying he has nearly made the tenant abandon gardening. Peas, Lettuce, Turnips, Radishes, Spinach, and other things have been an almost hopeless failure. It is in the early morning he gets to work, when no one is about. But I have just put my friend up to a way of reducing his numbers that has proved a success. I deal with him on the Maxim-gun principle, and I learned that from a gamekeeper in shooting wood pigeons. He boasted of killing as many as a dozen pigeons and more at one shot, which I did not credit till I saw it done. His plan was to strew Indian corn in single file in a narrow furrow not far from a turf hut with a hole at the side. Here he waited with the gun well charged with shot, and when the pigeons came and began pecking in a long row in a line with the hole, he sent a shower of shot along the line, killing nearly every pigeon. One exhibition of this sport was enough for me, but afterwards, when I was almost in despair about the sparrows, the idea was useful. I set a board up on about a level with my shoulder—a board at least 6 feet long—and in single line I strewed the most tempting sparrow food. In the morning there was usually an equally long row of sparrows on the board, and one cartridge of sparrow-shot delivered from the shoulder and on to the board used to make a clean sweep, and I waited for the next instalment. One post, a bit of deal, and gun are all that is required, and the plan will have the approval of the philanthropist, inasmuch as extinction is painless and as a rule instantaneous.

FLOWERS AT THE ROYAL ACADEMY.—Who are most to blame for the mistakes of artists such as are described in THE GARDEN of June 17: the artists, or the critics who profess to correct their mistakes? Natural objects, consisting of plants, flowers, and animals, are the stumbling-blocks to those painters of the Alma Tadema school who introduce natural objects

into their pictures as accessories, and which the professional critic whose school is the Academy is almost sure to miss or discreetly leave alone. Here is a story of one famous picture by an equally famous painter, both well known, the former having been often exhibited since it was first "hung," where the critics flattered it, passing over a gross caricature of a natural object occupying a prominent position in the picture. For obvious reasons I can go no nearer. This picture was purchased by a gentleman and taken to his mansion, where it fell under the eye of one who was more of a rustic than an artist, but who at first glance made the remark, "No one ever saw a — like that in Nature." This was repeated to the artist, who had the subject entirely rubbed off the canvas and the amended object restored from an actual example furnished by his critic. The truth is, some artists are like our comparative anatomists, only not so truthful. They procure a bit of a plant or an animal and evolve the rest with the brush.

LORD PENZANCE'S HYBRID ROSES.—These Roses, a new type, should now be about their best. As is well known, they are a cross between the wild Sweet Brier variety and some cultivated kinds, but they inherit the characteristics of the wild form in the greatest degree. I procured the first lot at the beginning, and have found them equal in vigour to the wild Brier, throwing up in good stiff soil tall, vigorous shoots from the crown each season like the common Brier, and producing, in some of the varieties, a profusion of bloom exceeding anything I have seen in the wild Rose. The flowers are single, much resembling the wild Rose, and the colours are varied and rich—bronzey or copper-coloured, deep crimson equal to Crimson Rambler, rich rosy red, delicate pink, and other colours. A group of these Roses mixed or distinct makes one of the most effective masses on a lawn that can be imagined, but the plants must be left alone, untouched by the knife, when they quickly form a thick, dense mass, every part of which is a mass of flowers at this season.

THE ROWAN TREE.—The Rowan tree, or Mountain Ash, is rarely seen to perfection except in cool and moist localities, and its real home is in the valleys and on moist hillsides of the north. Allusion to the brilliant-berried *Crataegus Pyracantha* makes me think of the Rowan tree, which, in my opinion, surpasses all our hardy ornamental-berried trees and shrubs. The tree grows to a good size, and the timber can always be sold for the same purposes as Birch. It never fails to bear an abundant crop of fruit, and the berries are always large and brilliant in colour where the situation suits the tree, which will grow almost anywhere, only the berries are smaller and not so bright in a dry soil or climate. Argyle is one of the homes of this beautiful tree, and in many places there it is to be seen as it is to be seen nowhere else, both foliage and fruit being very beautiful. It is the favourite tree in the gardens and grounds at many of the watering-places on the Clyde, and the tree is often planted to form an archway at the entrances to houses and gardens—"for luck," we suppose, there being an old superstition in the Highlands to that effect. Shepherds used to cause their sheep to jump through a hoop of Rowan tree once a year for luck to the flock. For a similar reason, I presume, there are planted and tended with great care three Rowan trees in one of the courts at the top of Stirling Castle that are specimens in their way as regards health and fertility. I never saw finer, and the trees when I saw them in August a few years back were literally

weighed down with the crop of berries, which were almost as big as marbles, clean, and brilliant. It is surprising how familiarity breeds indifference to things that we would be sure to treasure if they were only rare. When the female variety of the *Aucuba* was first brought to this country and so much was said about its red berries—the plant being about as stiff and dingy a subject as one could see—I used to compare it to the Rowan tree with its graceful drapery of foliage and profusion of scarlet fruit, much to the disadvantage of the former. The stiff little *Solanum capsicastrum* has pretty berries, but it is a greenhouse plant and lacks the grandeur of the Rowan tree. The only hardy shrub fit to compare with the Rowan is *Rosa rugosa*. It has fine and abundant foliage, but it is as a berried plant it is useful. On high and cold exposures the bush is ablaze with its large scarlet berries, and the berries of the white-flowered varieties are by far the finer and more brilliant. Next to this comes the common Barberry, unsurpassed for its brilliant berries borne in great profusion in a cool, moist climate, but seldom seen to perfection in the south. Planted thickly in woods, as I have seen it in Dumfriesshire, the woods seem on fire in October. Last October, in Dundee, one florist's window was draped with it and attracted much attention. I was told that it came from Blairgowrie. I had a branch of it in my room for over a fortnight. In forestry, if we wanted a profitable “nurse”—say, for the Oak—supposing the latter had to be planted where it could not nurse itself, I would plant the Rowan tree. Its few first years' growth is out of all proportion to its later growth, and it generally pushes up from seed with a single straight stem, the annual shoots being, perhaps, a yard long. Planted thickly, therefore, amongst more tender species it shelters them from wind whilst not overtopping them, and when the permanent crop—the Oak, for example—becomes established and can take care of itself, it overtops its nurse, which will then be fit for the timber merchant and may be removed. RAMBLER.

LAW.

MAY V. THYNE.

THE above case was taken in the Sheriff's Court, Glasgow, before the Registrar, W. Guthrie, on June 19 last, but, owing to its importance, judgment was then reserved. The main points in the case are briefly as follows:—

In the early part of 1898, Mr. George May, market grower, Upper Teddington, gave an original personal order to Mr. Thyne McCullum, representing Messrs. J. and R. Thyne, bulb importers, Glasgow, for 10,000 bulbs of *Lilium longiflorum* in two sizes, viz., 5000 of each size. The order, originally a verbal one, was subsequently confirmed by letters passing between the above-named persons. In due course the one part of 5000 bulbs was delivered and paid for, the remaining 5000 bulbs being booked at £6 10s. per 1000, the size being 7 inches to 9 inches. When the time arrived for the delivery of this latter portion, Messrs. Thyne wrote informing Mr. May that they only had some 2000 of the size required, and suggested sending *Lilium speciosum* Krætzleri partly in lieu thereof. To this Mr. May replied by return, asking that the 2000 stated to be in hand should be sent on at once, declining, however, to accept the other Lily named, it being useless at the season. Thereupon the Messrs. Thyne wrote stating that their offer of these two Lilies was made in full and complete settlement of Mr. May's order and must be accepted as such, failing which they declined to supply any portion of the second 5000 lot. Subsequently, Mr. May wrote to the effect that if his order was not executed forthwith, he would be compelled to

purchase against them, which indeed in part was done. The defendants pleaded that the bulbs were not to be purchased in the country, but it was shown that a large consignment was actually sold by auction in London at the time, and, though at greatly increased prices, Mr. May's order could have been executed many times over. The following is the verbatim judgment in the case:—

Finds that the defenders in spring, 1898, sold to pursuer 5000 bulbs *Lilium longiflorum* 7-9 at £6 10s. per 1000. Finds that in November they found they were unable to supply the said bulbs and intimated this to the pursuer, and that they did not deliver the same. Finds that it is not proved that there was any condition or custom releasing the defenders from their contract in the event of a failure of the foreign crop, or that there was such a crop. Finds that the pursuer has suffered loss by the defenders' breach of contract to the amount sued for. Therefore decrees against the defenders as craved. Finds them liable to the pursuer in expenses, allows an account thereof to be lodged, and remits the same to the auditor of the court to tax and report.

In an appended note the judge remarks:—

The case is very clear. The only obscurity or even question, and indeed the only point really attempted to be made for the defenders, arises out of the manner in which the pursuer has chosen to state what may be called the second part of his claim for damages. He may not have expressed himself in that with exactness and legal accuracy, but I think that the evidence is sufficient to show that the loss “directly and naturally resulting in the ordinary course of events from the sellers' breach of contract” (Sale of Goods Act, c. 51 (2)) is greater than the sum sued for, which is calculated on the footing that all the bulbs could have been replaced in the market by buying in at the price which was actually paid for a part. I cannot agree with the defenders in their attempt to throw back the date of breach till October or November 2, for I think that they did not finally give up hope of fulfilling their contract or put the pursuer on his inquiry for other goods till November 25. One is hardly surprised that the defenders, who appear to have been more generously dealt with by other customers equally disappointed with the pursuer, and whose breach of contract is sufficiently accounted for by circumstances which they could not control, should regard the pursuer as making a heavy or even an exorbitant claim. But it is only what he is entitled to ask for under the contract, and the evidence, such as it is, suggests, though I do not think it proves, that much more might have been demanded.

SOCIETIES AND EXHIBITIONS.

ROYAL GARDENERS' ORPHAN FUND.

THE annual dinner of this fund took place at the Hotel Metropole on Tuesday evening. Alderman Sir R. Hanson, M.P., presided, and among those present were Mr. Sheriff Probyn, Mr. Deputy Sayer, Messrs. N. N. Sherwood, H. J. Veitch, J. H. Veitch, Harry Williams, A. de Chapeaurouge, Arnold Moss, W. Foster, F. Blackwood, H. Turner, J. A. Laing, and Lieut.-Col. Wyndham Hart. The usual loyal toasts having been honoured, the chairman proposed “The Royal Gardeners' Orphan Fund.” He said only twelve years had passed since the fund was established. He wished he could say it was only twelve years ago that the necessity for it arose, but since the beginning of the world it had happened to some to be fortunate and others unfortunate. The fund did great credit to those men who had not only the power, but the will to come forward and do something to alleviate the sufferings of the orphans, and he was pleased to see that such a sensible start had been made. He was glad they had not gone in for bricks and mortar, and he hoped that for many years they would keep away from the builder. Let them spend all the money they could on the immediate necessities of the orphans and refrain from setting up a big building with its ever-recurring expenditure on “repairs.” It was all very well to put a nice illustration of a building on the top of the subscription list, but it really was not worth doing as an advertisement. He welcomed the establishment

by the London County Council of scholarships in practical gardening as a movement which might be of advantage in promoting the future welfare of the recipients of the fund's bounty. Mr. Wm. Marshall, who responded, referred to the fact that the committee had power to assist in starting orphans in life, and had already dealt with several applications for help of the kind. The executive committee had done him the honour of electing him chairman for the last ten years, and that position had naturally brought him into immediate contact with the late secretary, his old friend Mr. Barron. Nobody but those who were behind the scenes could have any idea of the amount of labour entailed upon the secretary in carrying on the working of a charity of that description. He had been requested to give Mr. Barron a presentation. It had been proposed by Mr. Harry Veitch, and seconded by Dr. Masters, that a testimonial should be engraved and framed and given to Mr. Barron on his retirement from the office of secretary, and that resolution the committee had carried out. He regretted that the name of Miss Barron also had not been submitted to the meeting, for she was entitled to credit for the amount of work she had done on behalf of the society, and for the manner in which she had aided her father in carrying out the secretarial duties. Mr. Marshall then, amid applause, handed the address to Mr. Barron, who briefly acknowledged it. The other toasts included “The Chairman,” proposed by Mr. N. N. Sherwood; “Gardeners and Gardening,” proposed by Mr. Arnold Moss, and responded to by the Rev. S. B. Mayall; “The Press,” proposed by Mr. A. W. G. Weeks, and acknowledged by Mr. George Gordon, who referred to the presence at the dinner of the editor of *American Gardening*, a gentleman trained in England and the son of Mr. Barron; “The Secretary,” proposed by Mr. Sherwood and replied to in a very apt speech by Mr. Wynne; and “The Treasurer,” proposed by Mr. Marshall. During the evening Mr. Wynne announced that the total amount subscribed was £590 3s. 6d., of which sum the chairman had given 20 guineas, Baron Schroeder 10 guineas, Sir T. Lawrence 10 guineas, Mr. R. Dean 10 guineas, Veitch and Sons 10 guineas, Mr. F. W. Burbidge £5, and Sheriff Probyn £5 5s. The Covent Garden list, included in the total mentioned above, amounted to £100.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, July 25, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. A lecture on “Seed Dispersal” will be given by Prof. G. S. Boulger at 3 o'clock.

Pot-pourri or Rose jar.—I should be much obliged if you would kindly give me a recipe for Rose pot-pourri, with the exact proportions of things used.—MRS. MILNE-HOME.

* * Gather Rose petals early in the morning and place in a cool place for an hour to dry. Toss them lightly, and then put them in layers, with salt freely sprinkled between, in a large glass-covered dish. Add fresh petals to this every morning. When you have sufficient, let the whole stand for ten days, shaking well every morning. In the bottom of a glass fruit jar place 2 ozs. of whole allspice crushed and 2 ozs. of stick cinnamon broken coarsely. Fill the jar with the Rose petals and salt. Let it stand for six weeks, when it may be prepared for the permanent jar. Mix together 1 oz. each of ground cloves, allspice, cinnamon, and mace, 1 oz. of orris root shredded and bruised, and 2 ozs. of lavender flowers. These are the proportions for one quart of Rose petals. Place this mixture in alternato layers with the contents of the glass fruit jar in the permanent jar. From time to time you can add a little lavender water or any other perfume. If the covers are removed for an hour at a time twice a day, your rooms will be filled with sweet odour.

NOTES OF THE WEEK.

Geum Heldreichi is a very pretty addition to our hardy plants, the colour a bright orange, which makes it a conspicuous object. It is free flowering and altogether a very desirable plant.

Mazus Pumilio.—Where a dwarf carpet plant is required in a moist or shady place this can always be strongly recommended. The plant flowers freely, more especially when growing freely. In the drier parts of the artificial bog the plant in question is a good one, and where situated among or near stones is generally content.—E. J.

A double Enothera.—I send you some flowers of a seedling double *Enothera* I have succeeded in raising. I think it very beautiful with its purple leaves and stem and bright clear yellow flower-heads. It is attracting the attention of every visitor.—M. CUTHBERTSON, *Rothsay, N.B.*

* * A very handsome plant.—Ed.

Lilium Burbanki.—This Lily, which is said to be a hybrid, having *L. Washingtonium* and *L. pardalinum* for its parents, was shown at Chiswick last week by Messrs. Wallace. The former is stated to be the seed parent and the latter the pollen parent. In the flowers alone and the colour and form particularly it has much in common with the somewhat variable *L. pardalinum*.

Hemerocallis Pioneer.—This is a seedling raised between *H. disticha* and *H. Thunbergi*, and a pretty addition to the group in question. In the form of the flower there is much to remind one of *Thunberg's Day Lily*, and in the colour there is a touch of both parents. A similar remark also applies to the foliage, so that it is quite possible *Pioneer* will prove a somewhat interesting plant.

Campanula G. F. Wilson.—Very few *Campanulae* have surpassed this in flowering this year, the blooms, both in colour and numbers, having been all that could be desired. It is, however, one of those that like a good depth of fairly good soil and, like not a few of its race, a rather heavy or holding soil, at least in part. Given these conditions, it is a capital plant for border or rockwork.

Clarkia elegans Salmon Queen.—This is one of the best forms of the *Clarkia*, and under good cultivation produces fine erect heads of blossoms. To see this variety at its best, clumps of good size should be sown and carefully thinned. The colour, a beautiful salmon, is one of the most pleasing of the whole family. In the borders at Aldenham House, Elstree, good use is made of it, handsome masses just now being at their best.

The Wedding Iris (*I. Robinsoniana*).—I beg to send you herewith a drawing of *Iris Robinsoniana* (Wedding Flower) sketched from the growing plant in our garden here. The plant stands 4 feet 3 inches from the ground to the top of the flower and is a very conspicuous object. I understand it was introduced to this country from Lord Howe's Island, where it attains a height of 6 feet.—J. C. LINDSAY, 2, *Linn-brane, Alexandria, Dumbartonshire*.

Sweet Pea Emily Eckford.—With so many Sweet Peas the difficulty has been to distinguish the difference between many of them. The variety under notice is quite distinct, and not only so, but also most effective when properly disposed in the garden. When cut the pretty bluish shade, suffused with mauve, enables one to get effects which would not be possible without flowers of these tints. If I were growing a small collection of these plants I should certainly include this variety.—D. B.

Tufted Pansy Magie.—Plants of this variety did exceptionally well last season and raised the hopes of growers in supposing they had found a new sort of a useful and distinct shade of colour—pale rosy mauve. This hope has been dispelled this season, as the blossoms are not nearly so pretty and effective, the colour being much deeper and the plants also have not done so well. This variety does not appear to advantage in exposed situations, a semi-shaded position evidently suiting it better.

Tufted Pansy White Duchess.—This still retains its position as the most refined flower of the type. Stock was very limited with me early in the season, but the few pieces that were got together have developed into large, handsome clumps. The growth of this sort is robust and spreading. In long periods of drought, plants of this type of growth have special advantages. Covering the ground as they do, the soil is kept cooler and moister than is the case with the majority of the Tufted Pansies. The blossoms

are large, irregularly margined, blue, tinted mauve on a white ground, with a faint suspicion of yellow in the rayed centre.

Tufted Pansy Walter B. Child.—The variety under notice is one of the best miniature-flowered kinds, and the blossoms are very effective. Little scraps placed out in the open border in March last are just now blossoming profusely, the dainty little blossoms on stout, erect footstalks and of good length being very showy. The flowers are rayless, broadly margined lavender-blue on a white ground. Small plants arranged about 6 inches apart have already filled in the intervening spaces.

Godetias, self-sown.—There is now in the pink of perfection at Aldenham House a grand mass of *Godetias*. A capital batch of seedlings, self-sown last autumn, came through the winter without any apparent inconvenience, and these have for some time now been making a wonderfully pleasing display. Rarely indeed does one see such a grand mass of bloom and also so continuously produced. Plenty of room must of course be given these plants to develop, and in so doing one is well repaid by the handsome return given.—B. C.

Iris Kämpferi.—In moisture-laden places this handsome *Iris* is now making a fine display, the great flowers in their many and varied colours defying description. Most effective, perhaps, are the rich blue and deep purple-hued kinds, while many of the lighter shades, some of which are nearly pure white and lined with blue or purple, are fine by reason of the contrast they afford. A rich and damp soil is well suited to such things, though not essential, seeing how they succeed in good border soil or even shady ditches.

Campanula persicifolia.—In last issue of THE GARDEN I notice two correspondents drawing attention to variation in size of flower of *Campanula persicifolia alba* Backhousei (syn., *grandiflora*). This variation is caused by carelessness in allowing seedlings to come up round the original plant, the flowers of which seedlings do not maintain the large character of the blooms of the parent plant. I have proved this. I enclose for your inspection a salver-shaped *C. persicifolia* flower which I think is even better than Backhouse's variety.—J. C. LINDSAY.

Lilium Martagon album.—There is something pleasing and satisfying in this pretty white Lily, though it is, unfortunately, not a common plant in all gardens even where good hardy plants receive special care. Some good spikes of it quite 4 feet high were at the Drill Hall the other day. A more everyday plant is the typical form, which often occurs in big clumps in or near to shrubby borders or the like. Nor is it opposed to the roots of trees, finding in their company an agreeable association and possibly deriving good by the shade such things give.

Tufted Pansy Archie Grant.—It is curious that this excellent and free-flowering kind, after having been in cultivation a dozen years at least, should have remained so long without its merit having been fully recognised. In point of colour, and not less so in the bold, erect carriage of its lengthy flower-stalks, it surpasses quite a large number. For large beds, too, it is invaluable, and equally so in the vigour of its constitution. The fact that its true value has only now been admitted can scarcely do it much good, for the plant has been grown by thousands for years past.

Erigeron speciosus superbus.—This beautiful *Erigeron* does not appear to have thriven in its usual way this season, and in other gardens as well as in my own I observe that it is dwarfer and less free-flowering than in all my experience. This is a disappointment, as one always looks forward to having a superfluity—if such can be—of its charming flowers, which have a lightness not always found among the composites. It is not easy to account for its poor growth this season.—S. ARNOTT, *Cursethorn, by Dumfries, N.B.*

Fuchsias in the greenhouse.—In one of the greenhouses at Chelsea the Messrs. Veitch and Sons have trained a large number of specimen plants of these to the principal rafters from either side. Now that the plants are in flower—and, indeed, they are literally loaded with blossoms—the sight is a very pretty one. At the same time it should be borne in mind that it is not every plant that will thus respond to ordinary treatment, and so near to the heart of London. A year ago some plants were allowed to grow without stopping, and these, given a large shift

early in the present year, are now ablaze with flowers.

Deutzia Lemoinei in S.W. of Scotland.—When I visited the beautiful garden of "W. D. R. D." a few days ago I found your correspondent apologising for an error made regarding this *Deutzia* in his recent note to THE GARDEN. The plant had been received with and planted near *D. discolor purpurascens*, and was, as I saw for myself, plainly marked on the nurseryman's label "*Deutzia Lemoinei*." The leaves looked very like those of *D. discolor purpurascens*, but when the flowers opened it was observed that they were those of a *Philadelphus*. The plant appears to be *Philadelphus Lemoinei*, and the error on your correspondent's part is one easily made.—S. ARNOTT.

Verbascum Lychnitis.—On p. 52 Mr. Arnott speaks of this as a Caucasian species, but it is also a British species, and is found wild in nearly every country of Europe. It is not a good garden plant, though it has established itself as a common weed in my garden, where I introduced it many years ago, wishing to grow it as a wall plant because it had grown as long as I can recollect on the walls of Haddon Hall, in Derbyshire. In most situations it is coarse and the colour of the flowers dull. However, it contributes its quota to the many ornamental hybrids of *Verbascum* which grow here, and makes a perennial when crossed with *V. nigrum*, though itself only biennial.—C. WOLLEY-DOD, *Edge Hall*.

Centaurea moschata alba.—In whatever form or colour, the various kinds of the Sweet Sultan are always popular; indeed, such charming things could scarcely be otherwise. The yellow and sulphur-coloured forms are well known and freely grown—the former especially so, while in the above we have the most recent addition to this lovely group of fragrant flowers. Happily, too, the new-comer is a good and pure white, fully as large, too, as the older kind and quite as delightful in its pleasing fragrance. It is a fragrance, moreover, of which one does not readily tire, and a handful of the blossoms makes a very charming vase. It was recently brought to the Drill Hall by Messrs. Jackman and Sons, Woking.

Trillium declinatum.—Under the provisional name of *T. declinatum* Mr. P. Neill-Fraser grows at Rockville, Murrayfield, N.B., a *Trillium* of exceptional stature and of great beauty. Unfortunately, it was over before I saw it, but there was no mistaking its vigour and free growth. It is not, perhaps, distinguishable from *T. erectum album* in its botanical characters, but from a gardening point of view the two can hardly be looked upon as the same. Growing beside the other Wood Lilies, its great height was very observable, and one could see that its flowers, which were over, had drooped slightly and had been larger than those of the other *Trilliums*. It is to be hoped that Mr. Neill-Fraser may soon have a large clump of this fine variety.—S. ARNOTT.

Acantholimon venustum.—This has been very fine this year, that is in so far as the number of its flower-spikes is concerned. The blooms, however, appear to have been somewhat shorter-lived than usual, doubtless owing to the intense heat and prevailing dryness of the atmosphere. At the same time it is when the majority of good rock plants are past and gone that we value such as this at its full, and in any case were the number of good plants much larger than is actually the case this pretty subject could not fail to be among the most select. Rare to seed, at least in this country, and certainly not easily increased otherwise, it is not likely to be a common plant. It is much less free than is *A. glumaceum* in its growth, for the latter may be increased at will.

Campanula cenisia.—This, though one of the most difficult of the genus to maintain in good condition for long periods, is certainly one of the most pleasing in its delicate colour, a very pale lavender-blue shade. In opposition to many, however, this one appears to detest rich soils, and is more likely to pass the winter safely in

the gravel walk should a scrap become located there than it is in a pot of rich, or even good loam. Grit and small stones should always enter largely into the mixture this species is grown in, and where a small plant is being repotted, it will be found a good plan to occupy the space around the old ball largely with crushed brick or small gravel. This rather firmly shaken together appears to meet its requirements better than a good general mixture. Manure should not be employed.

Pæonies.—The herbaceous Pæony is, perhaps, the finest flowering plant of the moment in the hardy plant garden. Particularly pleasing are the pure white kinds, and very chaste and beautiful the delicate shades of flesh and pink. In the garden these things speak for themselves, for then the beauty of their enduring and abundant leafage makes a welcome foil to the great massive blooms. In the exhibition tent and in a cut state their beauty is soon gone. Quite recently Japan has sent us new forms of Pæonies, many of a single or semi-double character, that possess a singularly striking tuft of modified petals in the centre of the flower, short, narrow strap-shaped or twisted filaments, usually tinted with cream or gold, that produce a very pretty effect when seen in the mass. Pæonies are greatly benefited by repeated soakings of water at the approach of the flowering season, which also assist the formation of good crowns for another year.

Veronica salicifolia.—About the Willow-leaved Speedwell there are a grace and elegant bearing that but few plants possess. The dainty white blossoms are borne on nearly horizontal spikelets, as also in erect, terminal, spicate racemes, and both combined produce a really pretty and pleasing result where large bushes obtain. The flowers individually are of a French white, in which is also the faintest suspicion of colour. The plant is also very free-flowering, the axillary spikelets that are usually first to expand their blossoms being disposed alternately in opposite pairs on the more or less erect branches. Compact in habit and free and graceful in its bearing, such a plant is a fitting member for the higher parts of the rock garden, where in mid-summer it will be seen to advantage. The habit is that of the soft-wooded, sub-shrubby type, and the species, which grows about 2½ feet high and about the same through, is among the neatest of its tribe.

Lilium monadelphum.—This fine Lily seems to do remarkably well in the garden of Mr. Robinson-Douglas at Orchardton, Castle Douglas, N.B. It is, perhaps, better known as *L. Szovitzianum* and *L. colchicum* than as *L. monadelphum*, but Bieberstein's name is that now recognised by the authorities. There are two forms at Orchardton. The finer of the two was received as *L. Szovitzianum* and the other as *L. colchicum*. The former bloomed a little later and is finer in colour and a little taller, but there is not difference enough to warrant distinct names. At Orchardton this Lily in a warm bed grows quite 6 feet high and is very handsome with its yellow, spotted, recurved flowers on the tall stems. Like some other Lilies, it is not easy to establish, but when once it has fairly become at home it is certain to please. It has been said to be a prince among early-flowering Lilies, and one can hardly say that the expression is inordinate praise.—S. ARNOTT.

Campanula grandis alba.—This is still one of the best of the white-flowered Bellflowers. It is a plant, too, with a fine constitution, surpassing in this respect at least all the members of the Peach-leaved Bellflower. If the above has a fault it is the inclination to travel somewhat at the root and in good soil to spread too freely and to encroach on smaller subjects. Notwithstanding all this, however, it is a good plant, and with knowledge of its growth and running at the root may be given a place where free scope can be secured it. The blue form is conspicuous when all the Peach-leaved kinds have gone out of flower, and the white in its way is equally valuable. As

the flowers are somewhat closely set on the tall, stiff spikes, a dense and compact head of bloom results. The flowers of *C. grandis* are salver-shaped, and thus display themselves to advantage. No plant is more easily grown, and clumps may often be seen in country gardens where but little attention is ever bestowed upon them.

Dendrobium fimbriatum oculatum.—I beg to enclose you a photograph of a good specimen of *Dendrobium fimbriatum oculatum* in the gardens here. The plant was bought seven years ago in a 6-inch pot and is now in a 15-inch pan. It has about 250 old bulbs and forty-five young growths, and when the photograph was taken it had seventy-three spikes of flower and was a glorious sight, as it is only when one sees a good specimen of Orchid in bloom that the true beauty is fully realised. The plant has been grown for the last two years in a Muscat vineery and wintered in a plant stove, as it is too large to be accommodated in the Orchid houses. It is watered freely when growing until growth is completed, then gradually dried off until the flower-spikes appear in spring, when a little water is given. It being an evergreen variety it must not be kept too dry during winter, but given a little water when the young bulbs show signs of shrivelling, or premature loss of foliage will be the result, to the injury of the plant.—WM. WRIGHT, *Taymouth Castle Gardens, Aberfeldy, N.B.*

Amianthium muscetoxicum.—Yielding to the authority of the "*Index Kewensis*," we ought in future to drop the late Asa Gray's name of *Amianthium muscetoxicum* and adopt that of *Zygadenus muscetoxicus*, which one is thankful to see is no worse to pronounce than the name by which it is generally known. One is led to mention this member of the Liliaceæ by reason of what may be called a chorus of approval with which several friends have simultaneously spoken of it. One cannot call it a showy, but it is a pretty plant with its racemes of creamy white flowers. It grows in a fairly moist, peaty soil, but is not considered by everyone of great hardiness. It is, however, quite trustworthy in the south-west of Scotland, and the increasing number of growers of hardy flowers in the district seems unanimous on the point. One enemy it has is the slug, which likes to crop it in early spring. *Zygadenus muscetoxicus* is said to bear the unattractive name of Fly Poison. *Helonias læta* is given as one of its synonyms.—S. ARNOTT, *Carsethorth, by Dumfries, N.B.*

Gaillardias.—How very striking and showy are these plants at the present time. Given good soil, firm planting, good seed, and treated as plants of not more than two years' duration, these things create a fine display in the garden. It is worth remarking, however, that old plants transplant badly. Young seedling plants or young plants from cuttings are always best for early planting, as then they take to the soil quickly and well. Seedlings raised now may, with good treatment, be of sufficient size to set out in permanent places during the ensuing autumn, and will flower freely in the summer of next year. Where it is not possible to plant out when ready, it will be found a good plan to bed them out in a reserve garden rather than confine the plants to small pots all the winter. These young plants are quite hardy even in severe winters, and it is only when through flowering month after month that their vitality is reduced that these things are liable to perish in winter. The strains of *G. grandiflora* are of such general excellence, and embrace so many quite as good as the so-called named kinds, that these latter are not worth the additional cost, unless it be a very distinct or exceptional form to be used more or less for saving seed from.

Houstonia cœrulea.—There are some of the most delicate and delightful of dwarf alpine plants that rightly are termed miffy subjects. Yet, as in all else, there are exceptions. We noted the other day in Mr. Whitehead's garden at Wimbledon a plant given no special care spreading into a veritable carpet, flowering amazingly and with great

freedom. It is the same with the blue as with the white, and of both kinds patches nearly a foot wide and nearly 1½ feet long spread out and flowered in the most charming fashion. Plants, too, that have been put out this spring have done equally well. The plants putting on this unwonted luxuriance are growing in peat and in various aspects. This, however, has nothing to do with the vigour of the plants generally, for they are all alike in each place. Indeed, judging by the progress of plants put out this year, it would be quite easy to cover a few square rods of ground with this delicate and pretty plant, and dozens of growers may place this in peat without getting a patch as large as one's hand for a year's growth. This Wimbledon garden is very high, and if secret there be in the matter, we incline to the notion that it is the outcome of elevation and the pure air that abounds at all times. In any case we have never seen such perfect sheets of growth.

OBITUARY.

MAJOR MASON.

WE regret to announce the death, on July 14, of Major Mason, of The Firs, Warwick, at the age of seventy-eight. He spent the early part of his life in the service of the East India Company. He was the son of Admiral Sir Francis Mason, K.C.B., and the grandson of Viscount Hood. Major Mason at one time was a member of the council of the Royal Horticultural Society, and was a frequent visitor at the meetings in the old South Kensington days.

The weather in West Herts.—Throughout the past fortnight the weather has been very warm, the maximum shade temperature exceeding 75° on ten days and 80° on three of those days. On the warmest day of all (the 19th) it rose to 84°, making this the warmest day as yet of the present summer. The ground is unusually warm, even for the middle of July, the temperature at 2 feet deep being 4°, and at 1 foot deep as much as 6° above the July average. The only fall of rain during the week took place during the night of the 17th, when the measurement amounted to less than a quarter of an inch. At one time during this storm the rain fell for six minutes at the mean rate of an inch an hour. No measurable quantity of rain-water has come through either of my percolation gauges for four days. During the eighteen days ending the 16th the wind came exclusively from some southerly or westerly point of the compass.—E. M., *Berkhamsted.*

Iris Kämpferi (H. S.).—See THE GARDEN, July 23, 1898, p. 72, and July 30, 1898, p. 81.

A new open space.—An open space, acquired at the expense of £3400, has been opened in the New Kent Road. One private donation was £1000.

Names of plants.—*Greenwood Pim.*—A form of *Nymphaea pygmaea*.—*Mrs. Monk.*—1, a form of the common Privet; 2, the Garland Rose.—*H. Hallett.*—1, *Escallonia macrantha*; 2, too shrivelled to identify; 3, *E. magnus* sp.—*R. N.*—Blue flower, *Brodiaea laxa*; yellow flower, *Brodiaea gracilis*.—*Mrs. Leveson Gower*—*Reseda alba*; blue flower, *Viper's Bugloss (Echium vulgare)*; Rose Celestial, the best of the kinds known as Maiden's Blush.—*Mrs. Wadham.*—The flower sent is *Eriopsis ratidobulbon*. It was first introduced from New Grenada in 1847. It is not a rare plant, but it is seldom met with in flower. Now your plant has reached a flowering stage it will probably bloom regularly every year. It is an interesting plant to botanists, but of no particular value.

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[JULY 29, 1899.

INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—		Crops, the winter and spring		Roses:—		Lilium Szovitzianum 85		Delphinium sulphureum .. 91	
Apricots	74	green	76	Roses, dark, the dearth of .. 82		Lily, the Panther	85	Fero, the Royal	91
Cherries on walls and in the open	75	Pea Bountiful	76	Roses, exhibiting, divested of their buds	82	Orchardton, Castle Douglas, N.B., a note from	87	Fritillaria pluriflora	92
Fruit tree on north walls .. 73		Pea Prodigy	76	Roses, some beautiful Tea .. 81		Pentstemons, seedling 86		Geranium cinereum album .. 91	
Gooseberries on trellises .. 74		Peas and drought	76	Roses, two fine button-hole .. 82		Plants, hardy, notes on 85		Iris tingitana	91
Peach Alexander	73	Peas, failure of	76	Garden Flora:—		Saxifrage, the double Meadow	86	ixia viridiflora	92
Peach trees, outdoor, and aphids	74	Peas, notes on	75	Coleus thyrsoides	82	Sweet William, Murray's double dark	86	Lilium chalcedonicum	92
Peaches, early, on open walls .. 74		Potato Ninety-fold	76	Week's Work:—		Tritoma citrcea	85	Lilium testaceum	92
Peaches, the outdoor	73	Tomatoes, spiral-trained .. 76		Fruits, hardy	83	Stove and Greenhouse:—		Mazus Pumilio	91
Pear Fertility	74	Tomatoes, winter	76	Kitchen garden, work in the .. 83		Clethra alnifolia as a market plant	88	Nymphaea Froebeli	91
Strawberries at Norwich show	75	Trees and Shrubs:—		Flower:—		Geraniums for winter flowering	88	Oenothera tetrapetala rosea .. 91	
Strawberries, the early 73		Catalpa hybrida	79	Alousoa Warszewiczii 86		Heliconia Sanderi	88	Pea, Mr. J. Wood's Scarlet .. 92	
Books:—		Viburnum macrocephalum .. 82		Carnations, border, at Chelsea	87	Heliconia Sanderi	88	Pratia angulata	91
"A Text-book of Plant Diseases"	75	Viburnum Opulus var. sterile .. 83		Daffodil seeds, sowing 87		Heliconia Sanderi	88	Prunella grandiflora alba .. 91	
"The Flora of Cheshire" .. 75		Viburnum Tinus	83	Flower garden notes 85		Heliconia Sanderi	88	Prunella Webbiana	91
Kitchen:—		Viburnum tomentosum plicatum in the Royal Gardens, Kew	77	Flowers, hardy, soil for 88		Societies:—		Synthyris reniformis 91	
Beet Sutton's Blood Red .. 76		Viburnum tomentosum plicatum, spray of, from a New Jersey garden	79	Gillenia trifoliata	88	Royal Horticultural 89		Miscellaneous:—	
Cabbage pest, a peculiar .. 76		Viburnums	77	Gillenia trifoliata	88	Notes of the Week:—		Finchley, recreation ground for	92
				Heuchera brizoides	86	Campanula Warleyi 92		June in S. Devon	79
				Heucheras, the	86	Carocation Isinglass 91		Schools, industrial, teaching horticulture in	92
				Iris German Beauty 88				Weather in W. Herts 92	
				July, 1899	85				

ORCHARD AND FRUIT GARDEN.

THE OUTDOOR PEACHES.

OUTDOOR Peach trees have improved wonderfully of late, and all without exception are now making splendid growth. At one time the trees made very slow progress, but lost time was quickly made good once warmer and more genial weather set in. The wood being made is short-jointed and sufficiently vigorous without being at all gross in character. The trees are clothed with young wood from the base to the top of the wall, and the shoots have already been fastened back twice, so rapidly have they grown. The young wood developing so quickly and early in the season is a good augury for the future, as such will, if we have anything like a fine autumn, ripen up thoroughly and develop an abundance of blossom-buds. Another pleasing feature is the very clean condition of the trees generally, for since red spider was got rid of—the which was a legacy left from the drouthy season of 1898—and the attacks of aphids mastered, they have given no trouble in this respect. The foliage has, of course, been washed whenever such was deemed advisable, and at intervals of a week or ten days a wash either with soft soap with a little flowers of sulphur added was administered with the idea of keeping them free from attack. Washing will, of course, be continued and as often as appears necessary, but during the last ten days it has been suspended in consequence of a good many showers of rain having passed over the district. Root-watering—always an important item in Peach culture—has so far not absorbed anything like the amount of labour that it has done in the past few years. Up to the time of writing it has only been necessary to give the borders one thorough soaking. Pond-water was used for this. This is conveyed to the gardens in pipes, which are laid along the front of the borders with taps fixed at convenient distances to which a hose pipe can be attached. Under such conditions watering can be done very economically. Immediately after the protection was removed the alleys were sprinkled with artificial manure, then pricked up and

afterwards mulched. The surface was then watered just sufficiently to prevent any undue waste of manure taking place, particularly the potash salts. Another dressing of manure will be given as soon as the fruits have finished stoning (and this has already taken place with regard to Alexander) which is sufficient to carry them through the season. With regard to the crop the trees are carrying, this can be pronounced as being very satisfactory, as there is but one tree which has failed to set. Alexander, Alexandra Noblesse, Royal George, Dr. Hogg, Raymacker's, Crimson Galande, and Dymond set very heavy crops and much thinning has had to be done. Magdala, Violette Hâtive and other sorts are also carrying a good lot of fruits, while among Nectarines, Lord Napier, Spenser, and Elruge are the best. Taking the trees collectively, the crop is a good average one, and, given warm weather and an abundance of sunshine, the fruits will swell up and be equal in point of size and quality to those obtained in previous years. A. W.

Peach Alexander.—As showing the difference between the two seasons, that of last year and the present, this variety was ready for gathering in 1898 early in July, while at the time of writing (July 5) the fruits on the same tree have only just finished stoning and begun to take their final swelling. This will, however, prove no serious drawback, as the indoor crop will not be finished until they ripen. As time goes on my admiration for this variety increases, it being such a hardy, vigorous grower and sure cropper. This year my tree is carrying a crop of fourteen dozen fruits and is well clothed with young wood, the whole presenting a very thrifty appearance. The roots have just received their final dressing of artificial manure, which has been washed in with a good soaking of soft water. Unless very hot weather should set in, this should suffice to carry them through.—S. E. P.

Fruit trees on north walls.—With a mild winter and one of the worst springs on record, as we registered 17° of frost in May, it is a relief to get a few fruits on a north wall when there are so few on any other. The trees being so much later set their bloom, while that in more favourable positions was quite destroyed. As regards north walls, much of the success obtained in such a

position will in a measure be owing to soil and locality. No one would advise a north aspect in the colder parts of the country or with a heavy, wet, badly drained soil, but in the south and on very light land, northern aspects are not made so good use of as they might be. In my case in the south the trees are so dried up on a south aspect that it is a relief to be able to grow Cherries, Plums and Pears on a cooler wall and with much greater success. For years I failed to obtain Cherries of a good size on a warm wall. I am aware heat and drought were answerable in a measure, but with lack of labour one cannot, even in large gardens, give the necessary attention to watering and cleansing that must be attended to if success is aimed at. It is wonderful in a very thin soil resting on gravel to see how well Cherries thrive on a cooler site, and the same may be said of Plums. On a hot wall the trees are difficult to keep clean and they do not make that close, sturdy growth that gives fruits the next season. My best Pears this year are on a north wall, and they are cropping better than in any other position.—S. H. B.

THE EARLY STRAWBERRIES.

I HAVE read with interest the note from Mr. Wythes on this subject (p. 3), and, considering that he has a warm, light soil to deal with and I a heavy one, I may congratulate myself that I had Strawberries ready for gathering only four days later than he did. Before reading Mr. Wythes's note I was running away with the idea that Strawberries were unusually late here this season, as I have frequently had them ripe on plants set out the previous autumn by the end of May. It seems I am not alone, and if it were possible to obtain the information, I expect a great many more growers are similarly situated. I rely on Royal Sovereign for early supplies. This has never failed me since I first began to grow it. It is a splendid cropper; the individual fruits are large and handsome in appearance, the flavour when the berries are fully ripened very good. This season older plants have produced a superabundance of foliage, which fact may, perhaps, be attributed to the soil having been in an equable state of moisture ever since the plants started into growth. The mulching of litter, too, having been put on early prevented this from evaporating, and that, coupled with the fact of the soil being heavy and rather retentive, has no doubt induced them to make more leaf-growth

than is usual here. This difficulty has been got over by removing the surplus, which has had the desired effect, and the fruits both swelled to a large size and coloured beautifully.

The plants which furnished the earliest fruits outdoors this season were planted last August, and, owing to the drought then prevailing, had to be frequently watered to induce them to start growing. The site they occupy is a warm border at the foot of a south-west wall, and they are in consequence very much sheltered. When in flower they sustained no damage from the frosts mentioned by Mr. Wythes; in fact, none of the Strawberries here suffered from frost effects either then or subsequently. Mr. Wythes's plan of leaving the litter loose amongst the plants until the fruit is set is a good one and worthy of consideration, especially by those living in districts liable to spring frosts. No doubt this would have the effect of saving many of the blossoms from being destroyed, and where the litter can be had, it is a very simple and economical method of affording protection. Sir Joseph Paxton, as may be expected, is also later than usual; in fact, I have one quarter on which the berries are now only beginning to ripen properly. Oxonian has set a heavy crop of fruit, which is swelling away freely and promises to be unusually large. Of the two very late sorts mentioned by Mr. Wythes I have not got Louis Gauthier, but have a small number of St. Joseph. The flower-spikes have been removed from these with a view to induce them to bloom and fruit later on in the season. If this variety proves satisfactory I shall increase the stock considerably this coming autumn, as in that event it will prove invaluable for furnishing fruit for table in the autumn months. A. W.

APRICOTS.

On looking the trees over a few days ago it was very pleasing to find what a really good average crop of fruit the trees are carrying. This is all the more gratifying, seeing that at one time I was afraid the trees would only have what might be called a nice sprinkling of fruit or a very light crop in consequence of the damage from frost. The same thing has occurred with regard to trees grown by cottagers in this district, and the owners are now very agreeably surprised to find that the trees are carrying quite as many fruits as they legitimately should. I cannot call to mind a similar occasion when all prospects of securing anything approaching a good crop of fruit appeared to be past and gone for the results to turn out so contrary to expectation in the way they have done. The question naturally arises as to why this should be so, but I think the matter may be explained by attributing the results to the fact of a great many of the bloom-buds, especially those nestling close to the wall, being only in a partly expanded condition when the disastrous frosts occurred. The most singular thing is that when these buds opened and set the fruit was such a long time in swelling off; in fact, it remained in a stationary condition so long and seemed to be so weak and wanting in vigour, that I considered the crop a failure. Some few spur-buds escaped, but the number is out of all proportion when compared to those on the young wood; hence my reason for saying as I did at the time that the crop would amount to a good sprinkling of fruit on the trees. By this we learn that the system of laying in a good quantity of young wood annually is a good one, as nearly, if not all the bloom-buds on the spurs, particularly those projecting some distance from the tree, fell victims to the frost. Some growers ignore the spur system and grow their trees much in the same way as we do Peaches. I prefer a modification of both, and like to see the trees furnished with a fair proportion of spurs in addition to laying in young wood wherever practicable.

The fruits are now stoning fast. The final thinning will soon take place, when with the aid of good feeding and abundant supplies of water, should the state of the weather necessitate it, they will swell quickly and should develop into

fine specimens. So far root-waterings have not been a heavy affair, as it has only been necessary to do it twice, the second time during the past week. The alleys being mulched, the rains which fell in the early part of the season were sufficient to maintain them in a moist state until the end of May or thereabouts. The trees have made satisfactory growth, and beyond one or two cases losses in the way of branches dying off have been but few. S. E. P.

EARLY PEACHES ON OPEN WALLS.

This season I have gathered even earlier than usual. I send you three varieties to note their quality, as in appearance the difference is so slight that if mixed up it would be difficult to separate them. My earliest fruit was Amsden June, and, as you will observe, this has the darkest colour of the three varieties sent. In my opinion, grown in the open the flavour is equal to that of the others—Early Alexander and Waterloo. All three are of American origin, but most valuable, for they give us fruits weeks in advance of the older kinds, and though I have heard their flavour condemned as being second-rate, I think they compare favourably with others. Amsden June was ripe on July 15 on a south aspect and from young trees. Last season I planted the three varieties named on the same wall to test earliness. The trees vary in growth, the Amsden with me being the weakest grower, Waterloo being more robust. With young trees this cannot be relied upon, as they differ much in the working, some going away with more freedom than others. I admit Amsden June has one slight drawback, being a clingstone, but otherwise I fail to see any great difference from Alexander as regards quality, and it is with me a little earlier. Alexander is a brighter-coloured Peach, and this was ripe on July 18. A few days at this season make a great difference often in prices to those who market Peaches. Alexander is a nice-looking Peach and has a brisker flavour than Waterloo, which with me is just softening (July 19), so that it will be seen all three varieties vary little as regards date of ripening. It may be asked, why grow all three? In a private garden it would not be necessary, but there is safety in numbers, as should one fail there are others to fall back upon. My favourite wall Peach is Hale's Early, but this is quite a fortnight later than any of the trio named, and it makes a valuable succession to those kinds, and, what is so valuable, it is of excellent quality and rarely fails to crop. I find Amsden June and Hale's Early much the best for forcing, and they follow each other closely, need little fire heat in comparison to some of the older varieties, and crop grandly. On the open wall Amsden June is the best cropper of the three kinds named. G. WYTHES.

Pear Fertility.—The fault noted by "J. C." in a recent issue of THE GARDEN—that of sudden and complete rottenness—has been noticed and regretted by most growers. It varies considerably in different soils. A partial cure for the early and complete decay of such Pears as Fertility and Beurré Capiaumont is to grow the trees as dwarf standards on the Quince on moderately poor soil. The fruit should also be gathered before it is quite ripe and sold and eaten with the utmost dispatch. Purchasers should be warned of the specially perishable quality of such varieties, and advised to sell or eat them before they go to sleep into rottenness. Citron des Carmes, another early Pear ripening in July and August, rots rapidly either on or off the tree. But it gives due notice of its approaching doom by changing from green to yellow or yellowish green. Neither does the Jargonelle keep long after it is ripe, but the deepening gold of its yellowish green flesh and its growing aroma warn its possessors to eat it in time.—D. T. FISH.

Gooseberries on trellises.—In many gardens birds have of late been so destructive to the buds of the Gooseberry in the winter months that any efficient means of protection is welcomed.

We see how well the Gooseberry thrives on walls trained in an upright position, and much the same result follows training on wires or wooden supports. The trees grown thus bear more freely and are so easily protected that I wonder this mode of culture is not more often seen in gardens. Few fruit trees are so much troubled by birds as the Gooseberry. I have seen whole quarters cleared, only a few stray buds being left, if no notice has been taken of the birds or attempts to stop their depredations made. I find when the trees are trained as advised birds are much less troublesome. I do not say that they do not touch the trees, but the branches being more exposed they have not the same opportunities as with bush trees. In my case the birds leave the trained trees for the bushes. In the case of trellis-trained trees the size and quality of the fruit are also better, the trees having more light and room. Many of the best kinds of Gooseberries are awkward growers, but if trained from the start they will do well. I admit they require a longer time to make trees, but if these slow growers are treated as cordons or double cordons on a trellis they soon cover a large space, and other growths from the base may be taken later on if desired. The trees grown as advised have a much neater appearance at all times of the year and the fruits can be gathered much more easily.—G. W. S.

OUTDOOR PEACH TREES AND APHIS.

THE condition of open-air Peach trees in many districts this season will, I fear, be very unsatisfactory, though gardeners here and there are able to give a good report. As a rule where the bloom escaped the disastrous frosts of the latter part of March, the cutting winds and generally cold temperature of April and May will have brought colonies of the dreaded aphis. In some gardens not only was the bloom ruined by frost, but the young growths injured also, and all that can now be done is to endeavour to secure a healthy growth for next year. I think many gardeners are too anxious to remove the protecting material from Peach walls. This, especially when consisting of fish netting, would, if allowed to remain, shield the tender growths from the crippling force of spring winds and keep aphis at bay. I knew a very successful Peach grower who used frigi-domo, and even this somewhat thick material was allowed to remain up until growth was considerably advanced, although, of course, in calm weather it was rolled up to the top of the wall. But, take what care one may, aphis will appear, and what makes matters much worse is that gardeners are often afraid of syringing the trees at this comparatively early date. I never found any ill-results from the practice, as during April the sun is not powerful enough for any harm to follow from forenoon syringings. If a fine morning is chosen the trees will dry before night, and one good forcible application from the garden engine is more effectual than all the dusting with tobacco powder, as it is difficult to reach the pest with this when the leaves are at all curled, to say nothing of the time the work takes. Some good growers, however, prefer the latter method, and those who in the matter of insects allow the trees to take care of themselves may as well root them up and throw them away.

Then the question arises, Which is the best insecticide? I think highly of quassia extract, never having found, as some assert, that its application gave the fruit when ripe a bitter taste. Of course, the attacks from aphis being stopped before the fruit commenced to soften, no syringing was needed after that stage was reached, otherwise I am not prepared to say that a bitter flavour would not have been imparted. In my case clear water was always used the following day to cleanse the trees and

fruit from any remaining sediment, which I think advisable whenever insecticides are used. Peach-tree syringing must be done with judgment, as while sufficient force to dislodge insects is necessary, the tender leaves are easily injured and blackened. Soapsuds form an effectual wash and act as a stimulant to the roots. The time it takes to administer say three or four thorough washings is well spent, as if the surface soil is well mulched previously, the roots get moistened and two birds are killed with one stone. The above-named insecticides are equally efficacious in the case of red spider and thrips, which often attack Peach trees in warm situations and shallow soils, and if not promptly checked, soon discolour the foliage and cause it to fall. After all that may be said respecting general cultural treatment, there is far more in situation than many suppose. Some twenty miles from where I write are some Peach trees perhaps forty years old; the garden (a small one) is surrounded on all sides by sheltering woods, and to this fact is attributable the almost perfect immunity from insect pests the trees enjoy, together with the good crops they annually yield.

NORFOLK.

STRAWBERRIES AT NORWICH SHOW.

I CERTAINLY did not expect to see so many or so fine Strawberries exhibited at Norwich. The show was held on the 13th, and from the accounts that had reached me from various parts of the country of the smallness and premature collapse of the Strawberry crop, I was prepared to find only a moderate display. Some parts of Norfolk, however, must have been favoured with a fair amount of rain, otherwise the ground from which these Strawberries were gathered must be in excellent heart and good all round cultural treatment afforded, as they were not only very large, but splendidly coloured. In Mr. Allan's first prize collection Gunton Park and the new Lady Suffield were very conspicuous, the first named being noticeable in most of the lots staged. The judges must have had some difficulty in arriving at their decision, so very near in point of merit did the various lots appear. In proof of the hot weather experienced in the county of late I may mention that both Waterloo and Latest of All were wonderfully well represented. Strange to say, Latest of All, which, by the way, cannot be called a handsome Strawberry, is in some gardens cockscomb and in others wedge-shaped, and sometimes on the same plant this distinction is noticeable. As far, however, as my experience goes, the old Elton Pine is a much later Strawberry, and although, perhaps, rather too acid for some palates, is grand for late supplies grown on a north border. Its colour also is very brilliant. I noticed a nice dish of Macmahon, a Strawberry I have never grown, but which is well spoken of by some. Perhaps some readers of THE GARDEN may have grown it and will relate their experience of it. How seldom now-a-days do we meet with good dishes of British Queen and Doctor Hogg. Why is it? Our forefathers used to grow both well, and they can be induced to colour to the point by propping up the fruit to the sun.

J. CRAWFORD.

Cherries on walls and in the open.—Few fruits suffer sooner than the Cherry in periods of heat and drought if the trees are in a light soil and well laden with fruit. A few years ago a lot of healthy young half-standard Morello Cherry trees was planted by a large grower close to the Thames. In winter and often in early spring the land is covered with water at high tides, yet these trees have given splendid crops yearly. This shows that the Cherry often suffers from drought in gardens, as here there is no sign of gumming or canker, which is so troublesome with wall trees. This year I notice there is a much greater loss of wood than usual, due no doubt to the

drought of last season. I do not care to see the leaves droop in hot sunshine, as is frequently the case when laden with fruit in a light, sandy soil. When planting I find it advisable to give the trees some heavier materials if the natural soil is very light, also to plant so that the border is not too sloping, as is often done, so that by mulching, the moisture given is readily retained. Bush trees I find do well, but are difficult to protect. On the other hand, they are less affected by heat and drought than wall trees. I prefer what are termed half-standards and not too gross growers.

—S. M.

BOOKS.

A TEXT-BOOK OF PLANT DISEASES.*

MR. G. MASSEE, the well-known fungologist, has just written a most interesting and useful book on the diseases of plants. It is intended for the practical cultivator of plants of whatever description he may be interested in, and it is written in language that can be understood by anyone who has had an ordinary education. Of course scientific words have to be used, but on the first time of their being used an explanation is given of their meaning. This is quite right, but I think it would have been a great convenience to the non-scientific reader if a glossary had been given as well. Now, if a word occurs not for the first time and the reader wants to know its meaning, he has to look in the index, where on finding the word he is referred to the page on which the explanation is given. This is often done in books at the present time, but I cannot consider it nearly so convenient for the reader as the old-fashioned glossary. While on the grumble, I should like to protest against books of reference like the one now under notice not having their edges cut; the tops catch the dust more, it is not nearly so easy to find the place you want on turning over the pages, and one has the trouble of cutting the book before one can read it. The cost of cutting the edges with a guillotine must be very slight. It is all very well for book collectors, who do not read, but merely collect books, to like the rough edges; but to those who often want to consult a book they are an abomination. The introduction is most interesting and suggestive, and should be read carefully through. Speaking of cures, the author very truly says: "Sometimes the attempt at effecting a cure is a success, frequently not. To the practical man who naturally hopes for a cure at every stage of a disease the result is generally disappointing. In the majority of instances where an annual plant is attacked cure is practically impossible, and in the case of perennials, the prospects of a profitable crop for that year are small. In such instances, however, the disease can be arrested in its course and a recurrence prevented." One reason that cures are not more often effected than they are is, as is pointed out a little later, that often when the first symptoms of an attack are noticed it is too late to do anything to stop it, the plant being internally infested by the parasite for some time before the latter makes its presence known by pushing to the surface of the leaf or stem attacked the spore-bearing portion.

Most readers will be surprised when they learn by how many different agents the spores may be carried from one leaf or plant to another. Great stress is laid on the necessity, if an attack of any fungus is to be prevented from recurring another year, of burning every portion of a diseased crop and not throwing it on to the manure heap, as is so often done. I am quite certain that many of our insect and fungus pests would be almost stamped out if there were no such thing in gardens as a rubbish heap, and if all that otherwise would find its way there were cremated. The author also comments on the folly of taking cuttings or sowing seed from plants infected with any disease, and suggests that "seedsmen should

* "A Text-book of Plant Diseases." By George Massee. Duckworth & Co.

be required to give a guarantee that seed offered for sale was obtained from healthy plants." Several pages are devoted to the consideration of the best fungicides and the proper way to apply them. This chapter cannot fail to be of interest to all horticulturists. Then follows an account of the various injurious fungi and the best means of dealing with them, which is profusely illustrated. The figures are mostly good, but are somewhat diagrammatic, and some of these printed from process blocks are rather faint, but, considering the price at which the book is published, one can only be surprised that they are so good. Several of the descriptions of fungi that are not known in this country seem rather out of place, for such plants as the vanilla, tea, coffee, sugar cane, &c., are never likely to be grown in this country. A scientific description is then given of each of the fungi already noticed, and an index of parasites, fungicides, and botanical terms, and another of host plants complete the volume, which I can most confidently recommend to all who are in any way interested in the parasitic fungi as being the best book I know on this subject written in a popular style. G. S. S.

THE FLORA OF CHESHIRE.*

THIS is one of many books on the flora of counties, but more interesting than usual from being the work of a poet, though Lord de Tabley, we think, has written some more beautiful things than those chosen for this book by his biographer, Sir Mountstuart Grant Duff. As regards the botany in the book, it is of local interest, but it is a pleasure to see anything so lovingly done as this is, and to know that Lord de Tabley had such a wide range of interests. There is a good biographical notice in the book and a list of persons who in the past were connected with Cheshire botany, besides a very good portrait of the author and a map of the county of Cheshire. The book is edited by Mr. Spencer Moore.

KITCHEN GARDEN.

NOTES ON PEAS.

THE dripping season has been very favourable to early and midseason Peas, and though we have had a couple of weeks of intensely hot weather, there is no sign of that failing to grow that often occurs at this time of year, and mildew so far is conspicuously absent. Among the early kinds Harbinger was exceptionally good this year, and gave a long succession of the sweet and well-flavoured Peas, and I should think that eventually this kind will be as popular as William Hurst and Chelsea Gem. As showing how varieties change from year to year, I may mention The Daisy, a really excellent kind that with me has usually done remarkably well. The pods are long and well filled, ten and eleven fine Peas of capital colour and flavour being not at all unusual. But this season I have only one row at all presentable. I always sow this Pea very thinly, as it has a distinct branching habit and is much more free than when drawn owing to thick sowing. I have sown none of the tall-growing, large-podded kinds of the Duke of Albany class this year, as I find that the dwarfier kinds are equally good and more productive and do not give out so quickly in hot weather. Empress of India is a Pea of the class I mean, seldom growing above a yard high, but producing more pods on one row than Duke of Albany would on two, the quality being all that can be desired. It quickly comes to maturity and may almost be classed among the first earlies, yet there could not be a better Pea for gathering now.

I sowed four rows in March, one each of

* "The Flora of Cheshire." By Lord de Tabley. London: Longmans, Green and Co.

Empress of India, Yorkshire Hero, Sharpe's Queen and Autocrat, and these have formed a most useful succession, the last being still in bearing. It is a splendid Pea in every way and withstands drought better than any other kind I know. These dwarf kinds all favour rather closer planting than the taller growers I have compared them with, but it is a great mistake to plant even these too closely. Where there is an abundant supply of manure, so that large quarters can be suitably enriched for Peas, I like to grow the rows at 10 feet or 12 feet apart and crop the ground between them, but I do not care for the plan that still obtains of digging a trench and filling in a lot of manure, sowing the Peas just above it. Here I am obliged to keep the Peas by themselves, and the kinds named above are the most suitable for growing under the circumstances. Where rows stand singly at a good distance apart mildew is never so troublesome, as it cannot so easily spread from row to row.

H. R.

Pea Sharpe's Queen.—I think the merits of this very fine Pea are overlooked in many gardens. I grow it rather freely, as I find there is no better flavoured kind, while its appearance and cropping qualities are both well up to the average. It grows about 4 feet high and is of free branching habit. This makes thin sowing necessary. A great many varieties are sown far too thickly, and being crowded fruit poorly and are soon over. I find, too, that these dwarf, strong-growing kinds must be staked very firmly and wide, otherwise they break down the stakes and fall about.—H.

Beet Sutton's Blood Red.—This is a good selection, the roots being of medium size and of perhaps the finest colour of any in existence. Well grown, the roots are very symmetrical, and the plant has a striking and ornamental appearance in the garden. Many stocks of Beet are good for a season or two, but proper care to keep them true is not taken, and in consequence the roots are coarse and flavourless. This I have grown for a number of years, and when the crop is growing the tops are as level as a table, while the roots may almost have been cast in one mould, so uniform are they in shape and size.—H.

Peas and drought.—The early Peas were never better both as regards crop and quality, but I fear the later ones, such as should give us dishes in August, will be less satisfactory, as it is almost impossible to keep the plants healthy. Of course, with a clay soil better results follow. It is strange how badly some varieties suffer from the heat in comparison with others. For the past four or five years the late Pea crop has suffered from heat and drought in light, porous soils, and it is a difficult matter to get regular supplies after July is past in such weather, no matter what culture is given. Much may be done by mulching and watering at night.—S. M.

A peculiar Cabbage pest.—The other day my attention was drawn to a breadth of summer Cabbage the foliage of which was mutilated and disfigured by some insect. At first I thought the enemy must be the Turnip flea, but it turned out otherwise, for the leaves of the Cabbage were swarming with a small black insect of the beetle type, which can jump with all the activity of the domestic flea, and can be detected by the click caused by its movements. A movement among the plants with the foot set hundreds in motion, and the damage done was very apparent, for after the insects have abstracted the sap from the leaves, the latter turn yellow and fall. They are not particular in their tastes, for a little further on I noticed a breadth of Cow Cabbage and a patch of Swede Turnips which had been attacked by the voracious pests.—H. H.

The winter and spring green crops.—In the southern parts of the country, unless we soon get a change of weather, I fear the winter and spring green vegetable supply will suffer, as now

July and early August should see large breadths of green stuff planted. Last season the vegetable supply was short owing to the same cause, as the plants made such poor progress after being planted. I am aware growth is rapid if the rainfall is ample, say, in August or September, but the danger lies in having such poor plants. Here will be seen the utility of ample space in the seed-beds. I have often noticed what a lot of room market growers give their seed to what is often done in gardens. They also sow on the flat and in an open position. A strong plant soon makes headway. I find I get much better results in such seasons by sowing later than usual. For instance, Kales or similar vegetables sown early in June, or say end of May, are much better than those that have been starving in crowded seed-beds for some time.—G. W. S.

FAILURE OF PEAS.

WITHIN the last two or three days some of the Peas in my garden have been attacked by a fungus apparently. As yet only the tops of the plants are affected, the lower part seeming quite healthy and bearing well. I enclose specimens of the parts affected, and should be much obliged if you would tell me what it is and what steps should be taken to lessen the evil or stamp it out. It is the first time that either my gardener or myself have seen it.—J. S. S.

*** As far as can be gathered from the somewhat bruised top of haulm received, the Peas are infested by thrips, and it is just possible mildew is also partly responsible for the check to growth. Thrips alone would work all the mischief, and these were found active enough on the partially developed pod sent. It is the great heat and dry atmosphere that injuriously affect Peas, rendering them an easy prey to mildew and thrips. If we are to have summers similar to those experienced in America, the cultivation of Indian Corn, the American substitute for Peas, will have to be the rule, as it is very certain our most popular vegetable cannot be successfully grown in a tropical heat. All that "J. S. S." can do is to have the unhealthy tops of haulm removed and a good soaking of water or liquid manure given to the roots, not a mere dribble, but enough to thoroughly moisten the soil to a good depth. This should be followed by a heavy mulching of strawy manure, with more water before the soil again becomes dry. If the plants are not too weak, the effect of this treatment will be to cause them to push forth strong side growths which will produce good gatherings of well-filled pods. It would appear that the newer varieties of Peas lack the constitution of the old favourites *Ne Plus Ultra*, *British Queen*, *Champion of England*, and *Veitch's Perfection*, as it is very certain we had fewer failures with Peas when these sorts were principally grown.—Ed.

Pea Prodigy.—"A. W." has a note of praise at page 44 on this fine Pea. I can also speak well of it, having grown it for several years in a light, warm soil. Its strong, vigorous habit of growth enables it to withstand drought well. With me its usual height was 5 feet, and the pods were produced in great profusion over a good long period. I have not grown *Boston Unrivalled*, named by "A. W." in his note. Those having a warm, shallow soil will do well to select these stout, succulent-haulmed varieties, as they hold out far longer than the less vigorous sorts during a hot summer. All the same, the best results cannot be expected unless a liberal mulch and sufficient root moisture are given. Pure manure is not essential, any loose refuse, such as the clearings of old hotbeds, Mushroom manure, or even grass mowings answering. Timely application is the great thing.—J. C.

Winter Tomatoes.—The present is a good time to sow seed of some free-setting Tomato for producing plants to fruit at Christmas. Sow in single small pots, say 3 inches or 3½ inches in diameter, place in a frame and keep close till the plants appear, then air increasingly until full

exposure is practised, tilting up the lights in rainy weather until the plants are fit for re-potting. Use a good holding loamy compost with some road grit or mortar rubble added, and pot firmly. With full exposure a stocky growth is secured, and if shifts into 6-inch and 9-inch pots are given before the roots become matted, a good supply of bloom trusses will form and set all up the stems. In October they may be removed to a comfortably warm house and a somewhat dry airy atmosphere maintained, this inducing the fruit to swell to a fair size and colour nicely in December.—NORFOLK.

Pea Bountiful.—We have so many good Peas to select from, that to the grower who has a large acreage it may seem out of place to name *Bountiful* as one of the very best for early supplies. This year *Bountiful* has been the most productive of the early kinds, and after two seasons' trial I place it at the top of the list for earliness and productiveness combined, the quality also being first-class. This year I grew *Bountiful* in pots, seeing how well it did previously sown as a first early, and it was quite as early as any other kind. Sown in the open the second week in February and not given protection of any kind, I gathered in May. I had this variety sent me for trial three seasons ago, and it is, I consider, one of the best early Peas recently sent out. In the open it does not exceed 3 feet high, the pods curved and packed with Peas of a good size. This kind, I notice, received an award at Chiswick in 1896.—G. W.

Potato Ninety-fold.—Different seasons bring out some kinds of vegetables to perfection much better than others, and with a late spring early Potatoes were somewhat later than usual. This affected all the early kinds. Though the growth was retarded by the severe cold in the early part of May, I find *Ninety-fold* was the least affected by the weather. Last year I sent a note on this variety and its excellence in referring to its earliness, and this season I am able to supplement my former remarks, and I think it is the best early Potato we have when its size and quality are considered. Owing to the severe weather in May the Ashleafs were none too early and I find the tubers small, as they have suffered from drought. *Ninety-fold* having a stronger haulm takes deeper roothold and gives splendid tubers, and being as early as an Ashleaf is most valuable. In future *Ninety-fold* will be grown largely for first supplies owing to its hardy nature. Being a beautifully shaped kidney with such excellent flavour, it will, I think, become a great favourite with growers who supply the market.—G. W.

Spiral-trained Tomatoes.—A practical gardener recently stated that he found the winding of Tomato stems round five stout stakes fixed in a circle to be productive of much greater crops than is the common rule of tying up vertically to single stakes. With sticks so fixed as to give a diameter to the circle of at least 9 inches it is obvious that at least three plants put out round the stakes 10 inches apart could be wound spirally round the supports, and in such case the product to each column should be very considerable. But beyond the gardener in question I have not heard of any other adopting the plan. There seems to be no doubt that diversion of the plant stems from the erect to the horizontal or oblique does in all things lead to greater fruitfulness. It is specially so in the case of Tomatoes, as plants put out close to the front of a house or frame and then depressed to run up under the roof or lights invariably crop more heavily than do vertical plants. I have seen other plants trained quite horizontally even more prolific. The object of the spiral training as thus referred to is to induce greater fruitfulness, and, so far as tested, it has proved to be very successful. Certainly the plants or fruits on the northern sides of the pillars would not get much sunshine, but then they would be in no worse case than are plants grown partially in the shade. But that would be a trifling obstacle or difficulty, as the fruits would certainly ripen a little later.—A. D.

TREES AND SHRUBS.

VIBURNUMS.

THE Viburnums are represented in all three of the great areas whence we in Britain obtain the bulk of our hardy trees and shrubs, viz., Europe, North America, and the Indo-Chinese region. It is in the last-named region that Viburnums most abound. Ten years ago, Mr. W. B. Hemsley was able to enumerate twenty-seven species in his "Index Floræ Sinensis" as being found in China alone. This number, as the country becomes more fully explored, will doubtless be considerably increased. Next in point in number of types comes North America; most of these, however, are of garden value more on account of beauty of foliage or fruit

which every flower is large and showy, but sterile. The plants producing the wholly sterile flowers are, of course, not true species, being incapable of self-reproduction. They are purely garden types. In their natural proportion these sterile flowers fulfil an important, although a passive, function in the life-history of the species. Their purpose is that of advertisement. They attract the insects which are necessary to bring about the fertilisation or cross-fertilisation of the less conspicuous perfect flowers. In the great majority of plants fertilised by the agency of insects each flower does its own share in the work of attraction, but some Viburnums, as well as Hydrangeas, attain the same results by devoting a portion of the flowers entirely to this purpose. With not more, perhaps, than one exception, the Viburnums are of the easiest cultivation. They simply need a soil of fair quality and plenty of moisture; the

NORTH AMERICA.

Acerifolium	Lentago (syn., nitidum)
Cassinoides	Molle
Dentatum (syn., mon-	Nudum
tanum)	Pauciflorum
var. variegatum	Prunifolium
Lantanoides (syn., alni-	Pubescens
folium)	

HIMALAYA, CHINA AND JAPAN.

Burejaticum	*Oderatissimum (syn., Awafuki)
*Coriaceum	Phlebotrichum (syn., Wrightii)
Cotinifolium	Sieboldi (syn., reticulatum)
Dilatatum	Stellulatum
Erosum	Tomentosum
Furcatum (syn., cordi-	var. plicatum
folium)	
Hanceanum	
Keteleeri	
Macrocephalum	

V. ACERIFOLIUM.—This is a shrub about 4 feet high, of compact habit, with Maple-like, three-



A group of *Viburnum tomentosum* var. *plicatum* in the Royal Gardens, Kew. From a photograph by Geo. Champion.

than that of the flowers. Of the European species three are cultivated, all of which are extremely valuable hardy shrubs.

The leaves of Viburnums are always opposite on the branches, and, although nearly always lobed or toothed, are invariably simple. The flowers are either white or pale pink and are borne in flattish, cymose clusters, mostly at the ends of the branches, but occasionally in the leaf-axils. The genus *Viburnum* bears one particular resemblance to *Hydrangea*, and this is in some of its species having two kinds of flowers on the same inflorescence, namely, fertile and sterile ones. There are three kinds of inflorescence in *Viburnum*: one in which the flowers are all fertile and of a uniform, comparatively small size; another which has the outer flowers of the cyme much larger and more showy than those of the centre, but sterile; and lastly, there is the inflorescence in

only thing to avoid is planting them in hot, dry positions. They can be easily propagated by cuttings and layers.

The following is a tabulated list of the species and varieties I have seen in cultivation out of doors in this country, but there are several others that require greenhouse treatment. It may possibly be of some use for reference. Not all the species mentioned are alluded to in the notes that follow, but such as are omitted are of quite secondary importance in horticulture, or of which little can yet be said. Those marked * are evergreen.

EUROPE.

Lantana	*Tinus
Opulus	var. Froebeli
var. fructu-luteo	var. hirtum
var. nanum	var. lucidum
var. sterile	var. purpureum

lobed leaves, which are coarsely toothed and downy beneath, the largest of them 4 inches to 5 inches across. The flowers appear in May and June and they are borne on slender-stalked cymes 2 inches to 3 inches across, and are white, with no large sterile flowers. The fruits are oval and black. Although introduced in 1736, this is not a common species, having but little beauty of flower. Its leaves, however, are very handsome in autumn, dying off as they do a rich claret colour. It is a native of the North-eastern United States, where it chiefly grows on rocky wooded hillsides.

V. CASSINOIDES.—Of the American Viburnums, this is certainly one of the best. It is widely spread over North America, and reaches from Newfoundland to the west of Hudson's Bay in the north and to New Jersey in the south, frequenting swampy places. It grows some 6 feet high, and unless crowded by other things is compact in habit. It has thick, leathery, ovate-oblong leaves, 3 inches to 4 inches long, and yellowish

white flowers produced during the early part of June in compact, flat cymes 4 inches to 5 inches across. It is very handsome in fruit, the berries changing first to rose colour and finally to bluish black. As they do not ripen simultaneously, fruits of both these colours, as well as green ones, occur on a cluster at the same time.

V. NUDUM closely resembles the preceding, but it has thicker and more glossy foliage. In a wild state it does not reach to such northern latitudes. Its flowers are white, and the fruits ultimately blue-black.

V. DENTATUM (the Arrow-wood).—One of the handsomest of *Viburnums* as regards flower, this is also a vigorous grower, forming a shrub 8 feet to 10 feet high, of compact habit and with handsome foliage. The leaves are $1\frac{1}{2}$ inches to 4 inches across, often almost orbicular, or even wider than they are long. They are chiefly noticeable for the very strongly marked venation and for the deep regular teeth. The flowers are all small and fertile, produced in terminal cymes 3 inches to 4 inches across, and are white. Its fruit is very handsome, being dark blue, but, unfortunately, it is only rarely that it ripens in any quantity in this country. The species is a native of the Eastern United States and is very hardy. Very near to this species comes

V. MOLLE, which is also a vigorous shrub, similar in habit to *V. dentatum*. The leaves differ in being very pubescent beneath. The flowers are white, but have more pointed calyx teeth. The fruit is of a similar blue colour, but is larger than in *V. dentatum*. *V. molle* is found from Massachusetts southwards to Florida, &c.

V. DILATATUM.—The first time this plant flowered in this country was in 1875 at the Coombe Wood Nursery. A figure was published the following year in the *Botanical Magazine*, but the species did not extend in cultivation, although it probably did not disappear altogether (it flowered at Kew in 1880). It has, however, been re-introduced in recent years. It is a shrub probably 6 feet to 8 feet high, the young branches, inflorescence, and nerves of leaves clothed with hairs. The leaves are 3 inches to 5 inches in length, often as broad as long, coarsely and unevenly toothed. The flowers are produced in large cymes 4 inches or 5 inches across; they are white, and all of the small fertile kind. As a fruit-bearing shrub this species is, in Japan and America, perhaps the handsomest in the genus, the berries being of a brilliant red, but whether our climate is not suitable, or because the plants are not yet old enough, they have not yet borne out this character here. The species is a native of Japan, where it is widely distributed and also abundant.

V. EROSUM.—More of botanical than horticultural interest, this only needs brief mention here. It is a sturdy bush 5 feet or a little more high, with much-forked branches and ovate, pointed leaves 2 inches to 4 inches long. The flowers are greenish white and borne on small clusters. The fruit is red. Its botanical interest is due to its being one of the few *Viburnums* with small linear stipules. A native of Japan, China, Corea, &c.

V. FURCATUM is a very rare and handsome species, which has recently been "discovered" in Lord Ilchester's interesting garden at Abbotsbury, in Dorsetshire. It is a native of North Japan at low levels, and of the mountains of the more southern portions. Closely allied to the beautiful *V. lantanoides* of North America, it is, like it, one of the finest shrubs for autumn colour. The leaves, which are large and broad, often almost orbicular, turn brilliant scarlet and reddish purple before they fall. In Japan this shrub grows 12 feet to 15 feet in height.

V. LANTANA (the Wayfaring Tree).—One of the commonest of *Viburnums*, this is also one of the handsomest and most useful. It is one of the two species native of Britain, but it is also widely spread not only in Europe, but in temperate Asia. At its best it is almost a small tree, growing as it does 12 feet to 15 feet high. Its

handsome heart-shaped leaves are noteworthy for the thick, pale-coloured down that covers the lower surface and which is also conspicuous on the young wood. The flowers are white and all fertile, being borne during May and June on flat clusters at the ends of the branches. The fruit is red at first, ultimately black, and the leaves often die off a rich red. There is a variegated form of no particular value, but the species itself is a useful shrubby plant.

V. COTINIFOLIUM is a Himalayan plant usually treated as a distinct species, but it is, more probably, only a geographical form of *V. Lantana*. In the case of small plants, at any rate, it is not easy to distinguish them. In *V. cotinifolium* the cyme is smaller and not so flat as that of *V. Lantana* and the tube of the corolla is shorter. Mr. T. Meehan observes that "on some accounts it is the better plant, the flowers, fruit, and foliage being all on a larger scale."

V. STELLULATUM and *V. BUREJÆTICUM* are both of the *Lantana* group. The former is from the Himalaya and is in cultivation at Kew, but I have not seen it in flower. The leaves differ from those of *V. Lantana* in not having a heart-shaped base and in the under-surface having a dark stellate pubescence. *V. burejæticum* is from China.

V. LANTANOIDES (Hobble Bush or Moosewood).—This is one of the few *Viburnums* that are difficult to grow, which is all the more unfortunate, as it is certainly one of the most beautiful, both as regards the fruit and the autumnal colouring of its foliage. It is a North American species, and is a large shrub or almost a small tree at its best. The leaves are almost round or heart-shaped, and, whilst averaging 3 inches to 4 inches across, are sometimes over 6 inches. The truss has its outer flowers sterile, and they are 1 inch or more in diameter; both they and the smaller ones that fill the centre are white. The fruit is at first coral-red, afterwards dark purple or almost black. The foliage dies off a rich claret. It is probable that the best success with this *Viburnum* will be obtained by planting it in a moist, not too sunny spot. American cultivators have the same difficulty with it as we have, but it is said to thrive better when grafted on *V. Lantana*.

V. LENTAGO (Sheep Berry).—More, perhaps, than any *Viburnum* we can grow in this country does this species assume a tree-like form. It has lustrous, ovate or lanceolate leaves, tapering rather abruptly to a fine point, the margins minutely and regularly toothed. They vary from 2 inches to 5 inches long. The flowers are creamy white and appear in large clusters in June or July. The fruit is blue-black and oblong. It is a native of Eastern North America, and is a desirable shrub both for its white trusses and for its handsome habit and foliage. Nearly allied to it is

V. PRUNIFOLIUM (the Black Haw).—This is also American, and also tree-like in habit. The leaves are of a lustrous dark green, resembling somewhat the leaves of a *Prunus* or *Pyrus*. The flowers are of a purer white than in *V. Lentago*, and the blue-black fruit is handsomer. On the whole this is, perhaps, the better species. Its foliage often turns red or purple in autumn. It is a native of the Middle and Southern United States.

V. MACROCEPHALUM.—In recent years this *Viburnum* has been largely used in the greenhouse. Of all the species it is the most showy and bears the largest truss. In this respect it almost rivals *Hydrangea paniculata*, which shrub, indeed, it much resembles, its flowers being all large and sterile and borne on a similarly shaped pyramidal truss. Unfortunately, it is not a very hardy plant and is rarely seen at its best out of doors. Fortune first found it in Shanghai, and sent it to the Horticultural Society in 1844. He mentions having seen it 20 feet high in Chusan. The leaves are ovate, blunt, 2 inches to 4 inches long, and covered beneath with a roughish pubescence. The individual flower is from 1 inch to $1\frac{1}{2}$ inches across and pure white. This plant is, of course, one that does not occur in a wild state, being a product of cultivation. Its flowers being wholly

sterile, it can only be increased by artificial means. The typical or wild plant from which it has been derived is also in cultivation, and is known as

V. KETELEERI (Carrière).—This has the centre of the truss (which is much flatter than in *V. macrocephalum*) filled with fertile flowers, the outer ones only being sterile and like those of *V. macrocephalum*.

V. ODORATISSIMUM (*V. Awafuki*).—As a rule, when grown out of doors this is given a place on a wall, as it is not absolutely hardy in all winters. It is evergreen, its foliage being particularly handsome. Each leaf is 3 inches to 6 inches long, of elliptical outline, leathery, and of a lustrous dark green. The flowers are in corymbs, and although small and dull white, are charming for their fragrance. It is a native of China and was introduced in 1818.

V. OPULUS (the Guelder Rose).—A native of Britain, this species is in gardens the best known of all the *Viburnums*. A vigorous, free-flowering shrub, requiring no special conditions, it makes one of the most useful stock plants for the shrubbery that we possess. This may be said still more emphatically of the sterile form commonly known as the Snowball Tree. *V. Opulus* grows 10 feet to 15 feet high, and its handsome leaves are rather Maple-like in form, being three- (or less frequently five-) lobed and irregularly toothed. The young branches are smooth and four-angled. In the wild form the outer flowers only of the cyme are sterile, and these are about three-quarters of an inch across; the centre is filled with small perfect flowers, both they and the others being white. In autumn this plant is valued for its clusters of fine red fruits and for the rich shades of its decaying leaves. Of its several varieties, the handsomest and most popular is

VAR. STERILE.—This has few or no perfect flowers, the whole truss consisting of the more showy barren ones. This causes it to lose its flatness and makes it much more rounded, which, together with the pure whiteness of the flowers, has led to its being popularly known as the Snowball Tree. It has, of course, none of the beauty of the common Guelder Rose as a fruiting shrub.

VAR. FRUCTU-LUTEO simply differs from the type in the fruits being yellow instead of red when ripe.

VAR. NANUM is a curious dwarf plant, growing only 1 foot or 2 feet high, and forming dense round tufts. It is a neat little plant, but a drawback is that it rarely, if ever, flowers. I, at any rate, have not seen it in bloom.

V. PUBESCENS.—Somewhat resembling *V. dentatum* and *V. molle*, this can, however, be distinguished from them by its dull green leaves. It is 6 feet or more high and of compact growth. The small leaves ($1\frac{1}{2}$ inches to $2\frac{1}{2}$ inches long) are only toothed on the terminal part, and are covered with pubescence, especially on the lower surface. The young shoots also are pubescent. In autumn the leaves die off a rich purple colour. The flowers are white, but none of them are of the showy barren sort. The fruits are oval, one-third of an inch long and blue black. A native of Lower Canada and the North United States.

V. SIEBOLDI (*V. reticulatum*).—A Japanese species first collected by Siebold, after whom it was named by Miquel. It is a strong, sturdy bush with distinct foliage. The leaves vary from 2 inches to 5 inches long and are usually broadest towards the apex and tapering towards the stalk; they are strongly veined and coarsely toothed towards the apex, the upper surface being dark green and glossy. The flowers are in flat terminal cymes and are creamy white, the whole of them being fertile. The fruit is black and half an inch long. The name of *V. Sieboldi* is sometimes erroneously given to an evergreen plant—probably *V. odoratissimum* or a variety thereof—whilst the true *V. Sieboldi* may be met with in nurseries as *V. reticulatum*.

V. TINUS (the Laurustinus).—In the southern and milder parts of Britain this species is one of

the most ornamental of evergreens. It is a native of the Mediterranean region, being found not only in the south of Europe, but in North Africa as well. Like many other plants from that region, it has long been cultivated in Britain. More than 300 years ago it was mentioned by Gerard as the Wild Baie Tree. A shrub of compact habit, it grows about 8 feet high, but is usually considerably more in diameter than it is in height. Its evergreen leaves are distinct among hardy Viburnums by the margins being entire. In the bud state and when quite young the flowers are rose tinted, but afterwards become almost pure white. The trusses are flat and some 2 inches or 3 inches across. In sunny positions it usually flowers freely, but not so in shade. Commencing to bloom in December, it will continue till the end of March. Although all its flowers are perfect, it does not ripen fruit regularly, but fruits occasionally occur, the colour being a dark blue. There are several varieties of the *Laurustinus*, one of which,

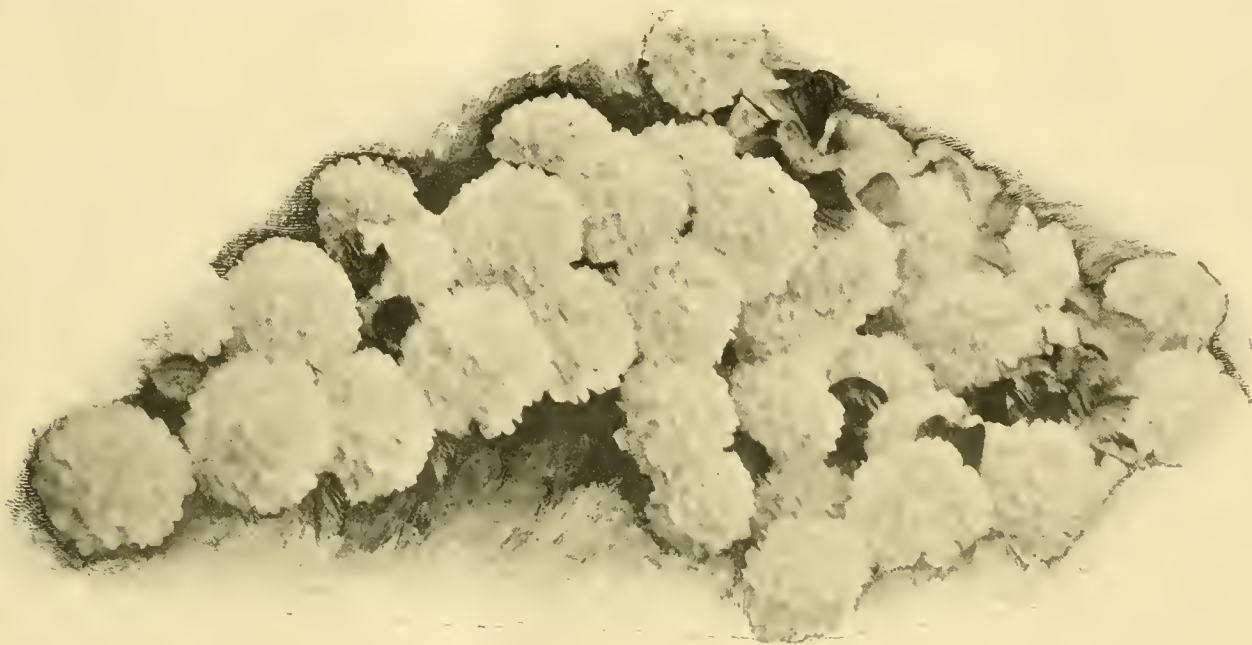
VAR. *LUCIDUM*, has fine large leaves, shining and almost smooth on both sides. The flowers and flower-trusses also are larger. It is possibly not quite so hardy as some forms of *Laurustinus*,

prove to be quite hardy in England, its merits as an outdoor shrub have only been appreciated in recent years, owing largely to a fear that it would not stand our climate. I have seen young, newly-rooted plants injured the first year after being put out, but when once established it will stand any frost up to 30° without lasting injury. It is a shrub of neat, yet graceful habit, well clothed with dark green, rather plaited leaves. It bears its fine trusses, 3 inches or more across, on short branches springing from the whole length of the previous year's growth, thus forming magnificent sprays of pure white blossom. As will be seen by the illustration of a bed at Kew, the plants are almost hidden by them at flowering time. The typical seed-bearing plant (*V. tomentosum*) is apparently not quite so sturdy a shrub, neither is it so striking when in flower, only the marginal blooms being of the enlarged sterile kind. It is not common, but was introduced from Japan at least thirty years ago.

V. CORIACEUM.—This is a species new to gardens, and is flowering now—probably for the first time in this country—at Kew. It is a native of N. India, China, &c., the plant at Kew having been received from the Jardin des Plantes at Paris

JUNE IN SOUTH DEVON.

In the early days of June the aspect of the landscape was one of exceeding loveliness. In the bright sunshine the varying greens of the deciduous trees, that had not as yet assumed the monotony of tint they exhibit later in the summer, were restful to the eye, the effect of occasional Aspens, striking a note of contrast in the prevailing verdancy, with the amber-brown glow of their young sunlit foliage being especially charming. Fields engirdled by high hedges of flowering Hawthorn were here and there golden with Buttercups, in which the red cattle stood complacently ruminating. The great Chestnuts' broad fan leaves were crowned with white flower-spires. Bean fields filled the air with fragrance, and in still, brown waters floated the yellow Lilies engirt with the tall sword-leaves and golden blossoms of the Flags. Spaces of sloping cliff were white with the Bladder Campion; on rocky crags bloomed the Valerians, pink, deep red and white; Sea Pinks painted with soft hue the ledges of the bluff headlands and spread long stretches of colour above pebble-strewn beaches. As the month advanced the Butterfly Orchis lifted its tall white spires from the shady bank; the Meadow Gera-



Spray of Viburnum tomentosum plicatum from a New Jersey garden. From a photograph sent by Mr. J. N. Gerard, Elizabeth, New Jersey.

and should have a sheltered, sunny spot. Another distinct shrub is

VAR. *MIRTUM*, the distinguishing character of which is the hairiness of the leaves and branches.

VAR. *PURPUREUM* has the leaves suffused with a dull purple tinge.

All the forms of *Laurustinus* can be struck from cuttings. They are most useful for forcing, for, coming naturally into bloom before Christmas, they require but little heat. Neat, compact plants in small pots are now sent over by the continental nurserymen for forcing in considerable quantities.

V. TOMENTOSUM (including *V. plicatum*).—Of all the *Viburnums* now in gardens, the one now figured will by most people be considered the best. It is the sterile form of the Japanese species known as *V. tomentosum*, standing to that species in the same relation that the Snow-ball Tree does to the common Guelder Rose. It is commonly known as *V. plicatum*; its correct botanical name is *V. tomentosum* var. *plicatum*. It was introduced by Fortune about fifty years ago, but although he said it would doubtless

with the information that it came from Yunnan. It is interesting as an addition to the few evergreen hardy *Viburnums*. The leaves are of a very dark green, 3 inches to 5 inches long, oblong, pointed, remotely toothed and perfectly glabrous; they are not unlike those of a green Aucuba in texture and general appearance. The flowers are in small terminal corymbs, white, and almost tubular. It does not promise to have many attractions as a flowering shrub.

Arboretum, Kew.

W. J. BEAN.

Catalpa hybrida.—A hybrid *Catalpa* named as above by M. L. Spath, who obtained it, is the object of a description and coloured plate in *Gartenflora*. It is the outcome of crossing *Catalpa ovata* and *C. bignonioides*. In habit it resembles the former, but the leaves are more irregular in form. The leaf is more or less heart-shaped at the base, then suddenly terminates in a long slender point. The lower side of the leaf is covered with a down similar to that of *C. bignonioides*. Alike in the form and general colour of the flowers it is not perceptibly distinct from *C. bignonioides*.

nium (*G. pratense*), though not admittedly a Devon flower, disclosed its blue blossoms by the lane-side, and the hedges were thickly starred with festoons of Dog Roses, white and shell-pink, with rosy unexpanded buds, while beneath their dark green leafage the Sycamore's pale "keys" hung in countless bunches. In the garden, *Achillea ptarmica* fl.-pl. The Pearl has produced its profusion of white flowers, and the tall blue Monks-hood (*Aconitum Napellus*) has mirrored its image in the lakelet by which it grows. The pale blue *Agathaea celestis* has in most cases survived the winter and is now flowering freely, while *Alliums* of sorts, though their pungent odour when bruised detracts considerably from their value, have been decorative in out-of-the-way corners. The pretty little *Anomatheca cruenta* has borne its deep red flowers in a sheltered border of light soil. This pretty Cape bulb should be given a place where *Sparaxis* and *Ixia* can be grown with success. The hybrid *Aquilegia*s have been lovely as ever with their graceful contours and suave colour-harmonies, and are especially effective when used in two shades for dinner-table decoration. In heavy soil they should be raised annually from seed, as the plants lose

much of their vigour after their second season, even if they do not perish. *Alstroemerias*, especially the hybrid varieties, are among the most charming of June flowers, their range of hues from crimson to cream providing a colour-scheme in which the gradations of tints mingle in a harmonious whole. They are easily raised from seed and are perfectly hardy in the south-west either in light or heavy soil, while they increase in beauty from year to year. It is said that the roots should be planted 8 inches deep, but as a large batch of plants growing in heavy soil passed through the long and severe frost of 1895 without receiving the slightest harm, though their roots were but 3 inches below the surface and they were totally unprotected by mulching, I place but little faith in this recommendation—at all events in this locality. The *Anthericums*—St. Bruno's Lily (*A. Liliastrum*), with its spikes of large white flowers, and St. Bernard's Lily (*A. Liliago*), with its smaller-flowered bloom-scape—have been decorative, and in the water the Cape Pondweed (*Aponogeton distachyon*) still produces Hawthorn-scented white flowers, while in the wild garden the tall *Anchusa italica* rears its straggling head of small deep blue blossoms. A handsome flower, but rarely seen in gardens, is *Arctotis aspera* var. *arborescens*. Its white, Daisy-like blooms are almost 3 inches in diameter and have an annular band of yellow around the dark eye, while the outer sides of the petals are flushed with crimson. This plant is easily raised from cuttings and succeeds in gardens where *Mesembryanthemums* are at home. As a cut flower its lasting properties render it valuable, since it retains its freshness for several days after being cut. The *Armerias* are bright in rocky and border, *Astrantia maxima* has developed its quaint flowers, and in shady spots the *Aubrietias* blossomed well into June. *Beschorneria bracteata* in a garden of rare plants has thrown up its tall, branching flower-panicle, bright red in colour. *Brodieas* are in bloom, the most conspicuous being *B. coccinea*, with scarlet, yellow-tipped flowers, and the purple-blue *B. laxa*.

THE MARIPOSA LILIES

have been lovely, some of the forms of *Calochortus venustus* being of exquisite beauty. *C. v. Vesta*, a very beautiful variety, appears to be the most vigorous of all, and, besides flowering freely, produces blossoms some of which are 4 inches in diameter. Large plants of the bush *Calceolaria* some 4 feet through are golden with bloom, and of the *Campanulas*, *C. glomerata*, *C. grandis*, and its white variety *C. persicifolia*, its white, double white, and large white form, as well as *C. urticæfolia*, have come into bloom, while the borders are bright with the Canterbury Bell (*C. Medium*), and in the rock garden forms of *C. carpatica*, *C. caspitosa*, and other dwarf varieties are flowering. Carnations are commencing to brighten the beds, and the blue Cornflower (*Centaurea cyanea*) is producing its deep coloured flowers in quantity from self-sown seedlings that are now bushes 3 feet in height and almost as much in diameter. *C. macrocephala* and *C. rubra* are also in bloom, and walls and rockeries have been white with the flowers of the *Cerastiums*. *Chrysogonum virginianum* is still bearing its golden blossoms. This is a useful plant, easily raised from cuttings, which may be put in any bare spot that may occur through the summer and autumn, and which it will soon furnish. *Convolvulus Cneorum* has produced its pale pink flowers on its silvery foliage, and *C. mauritanicus* its white-throated blue blossoms. *Coreopsis grandiflora* has already commenced to display the bright gold of its large star flowers, and *Coronilla iherica* is showing the same tint in its lowlier blooms. *Crinum capense* has perfected the first of its massive flower-scapes, and gardens are bright with the tall spires of *Delphiniums*. The light, Cambridge blue varieties are decidedly the most attractive, as they are of a colour that is almost unique in the garden; whereas the darker blues and purples are met with in many flowers. *Bella Donna* is an old light blue variety that is not easily beaten for

colour. The dwarf scarlet *D. nudicaule* has been also in flower in a rock garden. *Dianthus Napoleon III.* has made a spot of bright colour in the border, and the tiny pink *D. deltooides* has bloomed on rockeries. *Dictamnus Fraxinella* and its white variety have thrown up handsome spires of bloom, and *Doronicum plantagineum excelsum* Harpur-Crewe has continued to produce its large yellow star flowers through the month, while the mauve, golden centred blossoms of *Erigeron (Stenactis) speciosus* are borne in greater profusion, and the little Mexican Daisy (*E. mucronatus*) is blooming freely wherever the self-sown seedlings have sprung up. The Sea Hollies are now at their best, *Eryngium amethystinum*, *E. Bourgati*, and *E. Oliverianum* being among the most ornamental, the steely blue, metallic lustre of the bracts being most striking.

In the wild garden the white Foxgloves have created a lovely picture, and the Plantain Lilies (*Funkia*) have reared their soft-coloured flower-spikes above their cordate foliage. The best of all the *Funkias* for effect is *F. Sieboldi*, whose glaucous leaves form a pleasing contrast to the foliage of other occupants of the wild garden. Large bushes of *Fuchsia Riccartoni* and *F. gracilis* are in flower; *Gaillardias*, *Gazanias*, and *Geum coccineum* help to brighten the borders; and of *Geraniums*, *G. argenteum*, *G. lanceolatum*, *G. sanguineum*, *G. phæum*, *G. striatum*, and *G. Wallichianum* have been in bloom. The Edelweiss (*Gnaphalium Leontopodium*) has been in profuse blossom, and of the family of Day Lilies, *Hemerocallis flava*, *H. Dumortieri*, *H. aurantiaca* major, *H. fulva*, and *H. Kwanso* fl.-pl. fol. var. have flowered. These flowers have a far finer effect when massed in breadths of from six to a dozen plants than when grown as single specimens in the border. The Sun Roses (*Heli-anthemum*) have been brilliant in rock gardens, *Heuchera sanguinea* has borne its coral-red pyramids of bloom, and the St. John's Wort (*Hypericum calycinum*) has studded rough stony banks with its golden flowers, while *H. Moserianum* has also been in bloom. *Iberis gibraltarica* has been flowering well in rockeries, and *Inula glandulosa* has expanded its deep orange, narrow-rayed star flowers. Spanish Irises (*I. Xiphium*) have been extremely decorative in the garden—Golden King, orange-yellow; Canary-bird, pale yellow; Snow Queen, white; and Celestial, blue, being good of their colours, while the old Thunderbolt is of vigorous habit and not unpleasant tints. Of the English Irises (*I. xiphoides*), the pure white, deep blue, claret and French-grey shades have all been very attractive, and both in this and the foregoing section the self colours are infinitely to be preferred to the splashed or mottled varieties. *Iris sibirica* has also been in bloom, as has the tall-growing *I. orientalis*, formerly known as *ochroleuca*, and the yellow *I. Monnier* and *I. aurea*. The German Flags have furnished an opulent display—*flavescens*, pale yellow; Princess of Wales, pure white; *atropurpurea*, dark purple; *pallida* and *pallida dalmatica*, different shades of lavender, very sweetly scented; *florentina*, white, passing to grey; Queen of the May, rosy lilac; *Gracchus*, primrose and crimson; *Mme. Chereau*, white fringed blue; *Victorine*, violet and white, and *Darius*, yellow and netted purple, being all excellent varieties. *Iris variegata* is very similar to *Darius*. *I. setosa*, a comparatively small flower, lilac-blue in colour streaked with white, has also been in bloom, as has the handsome deep yellow *I. juncea*, a bulbous species, not unlike Golden King of the Spanish section, but with broader falls. *Jaborosa integrifolia* has lost much of its vigour in the neighbouring garden where it was established some years ago and appears likely to die out altogether, there being only two scented white blossoms this year against a dozen last year. Lilies of the Valley have flowered with prodigal lavishness, and *Marliac's Water Lilies* commenced to expand their blossoms by the first week of the month. The Madonna Lily (*Lilium candidum*) has been particularly lovely in the majority of gardens, and I have seen less of the disease this

year than for several years past. The Orange Lily (*L. croceum*) has also blossomed well, as have varieties of *L. umbellatum* and *L. Thunbergianum*, the variety of the latter known as Prince of Orange, of a soft yellow tint, being particularly pleasing. *L. Martagon* and *L. Martagon album*, *L. Hanson*, the brightly-coloured *L. tenuifolium*, the buff *L. excelsum* or *testaceum*, and the chrome-yellow, red-anthered *L. pyrenaicum*, with its pungent odour, have flowered, as has the beautiful *L. Szovitzianum*, with its pale sulphur blooms, some spotted with minute black spots and some pure in colour. *Libertia grandiflora* has produced sheaves of white bloom-spikes, and in deep, porous soil attains a height of 4 feet. The herbaceous *Lupines*, blue and white, have also been very decorative, as have the tree *Lupines*. Large plants of the latter, 7 feet high and as much through, form striking pictures when loaded with their pale yellow or white flower-trusses. Old plants, however, have a way of dying off without any apparent reason, but a pruning back after the flowering season is past often results in vigorous growth that carries the plant on through the succeeding year. *Linum flavum* and *L. arboreum* were golden with flower early in the month, and towards its close *L. narbonense* opened its blue blossoms, while *Lithospermum prostratum* has borne its deep blue flowers for many weeks past. *Lychnis Viscaria splendens* fl.-pl. has been in bloom, as has the white-flowered *L. Viscaria alba plena*, and the large scarlet flowers of *L. Haageana*, with the brilliant flower-heads of *L. chalcidonica*, brightened the borders before the close of June. *Malva moschata* is white with flower, and the Night-scented Stock (*Mathiola bicornis*) has produced its sweetly perfumed blossoms. In the light soil of sunny gardens near the sea *Mesembryanthemums* have been a blaze of colour. By the waterside the *Mimulus* bears its crimson and gold blooms, and *M. cardinalis* affords a note of vivid colour. The old-fashioned Bergamot (*Monarda didyma*) and its white form have expanded their fragrant flowers, and the blue of *Myosotis dissitiflora* is not yet absent from the garden, while the Marsh Forget-me-not (*M. palustris*) is in full flower in damp spots. The Sweet-scented Tobacco plant (*Nicotiana affinis*), that increases by self-sown seedlings and springs up so plentifully from the old roots in some gardens as to be almost a weed, is becoming starred with its odorous white blossoms, and the pale mauve-white *Nierembergia frutescens* is bearing in a neighbouring garden its pretty fragile flowers. Evening Primroses are represented by the lovely white (*Oenothera marginata* and *O. speciosa*, both most ornamental plants for the rock garden, and also by the border varieties *O. fruticosa* and *O. Youngi*. *Ononis rotundifolia* has borne its Pea-like, rose-coloured blossoms, and *Onosma tauricum* its drooping yellow tube flowers, while *Ornithogalum arabicum* and *O. pyramidale* have blossomed and *Orobanchia aurantiaca* has been a mass of orange flower-scapes. Many of the Tree Peonies suffered so severely by the frosts of the latter days of March, that the flowering season has scarcely been a satisfactory one, but in sheltered situations specimens bloomed well. In this section fine flowers were borne by *Reine Elizabeth*, *Lactea*, *Triomphe de Vandermaelen*, and some unnamed imported semi-doubles, while of the herbaceous section, *Miss Salway*, white and sulphur; *Maria Kelway*, pale blush and white; *Whitley*, lemon-white; the single whites *Emodi* and *albiflora*, and *tenuifolia* were very attractive.

TUFTED PANSIES

are charming flowers, and many very beautiful effects are obtainable through their aid. The following are pleasing varieties: Border Witch, pale blue shaded; *Christiana*, cream; Blush Queen, pale lilac; Countess of Hopetoun, white; Archie Grant, indigo-blue; Duchess of Fife, primrose, edged blue; Masterpiece, pure white; Virginius, blush-lilac; Magnificent, dark mauve-blue, and Pembroke, yellow. The majority of the great Paris Daisy bushes were killed by the

March frosts, but such as escaped are now covered with flower. Where the Ivy-leaved Pelargoniums passed through the winter scathless, as they have done in certain favoured nooks, they are now commencing to furnish delightful pictures, and only a few days ago I saw a house the front of which was covered 10 feet high with the salmon-pink Mme. Crousse, that had grown there unharmed since the spring of 1895. In the early days of the month the mauve Pentstemon Scouleri was bright in the rock garden, and now the ordinary herbaceous varieties are in bloom. The white Pinks have filled the air with their sweet scent, flowers of Her Majesty being very large, but splitting the calyx badly. Jacob's Ladder (*Polemonium ceruleum*), both blue and white, is flowering in the cottage gardens, and the Poppies have made a brilliant show, the giant Oriental Poppies (*Papaver bracteatum*) dominating the garden with their blaze of vivid scarlet. The Iceland Poppies, yellow, orange, and white, are beautiful alike in the border or as cut flowers, while the apricot-pink *Papaver pilosum* is of particularly soft colouring, and the Welsh Poppy (*Meconopsis cambrica*) with its drooping yellow blossoms has a pretty effect edging the by-paths of the garden. *Potentillas* are also in bloom, and *Ranunculus pyrenaica*, flowering grandly on the shady side of a perpendicular rock wall, presented a pretty sight early in the month. *Ranunculus aconitifolius* fl.-pl. is in bloom, as is the pale blue *Scabiosa caucasica* as well as its white variety, while the tall sulphur-flowered *Scabiosa elata*, 6 feet in height, is proving its excellence as a subject for the wild garden. Sedums are haunted throughout the sunny hours by murmurous companies of the hive bees. The beautiful *Sidalcea Listeri* has expanded the first of its pink flowers upon its branching flower-stems. *Silene alpestris* is covered with white flowers, and of the herbaceous Meadow Sweets, *Spiraea Aruncus*, *S. japonica*, *S. filipendula*, *S. venusta*, and *S. palmata* have come into bloom. *Thalictrum aquilegifolium* and *T. adiantifolium* are in bloom, but the inconspicuous flowers of the latter species are a minor consideration to the beauty of its leafage. The deep violet-purple *Tradescantia virginica* and a handsome white form are in bloom, as are *Verbascum phoeniceum* and *Veronica*s in variety. Many annuals are already bright with flower, among which are noticeable the *Nigellas*, *Antirrhinums*, blue *Lobelias*, brilliant yellow *Eschscholtzias*, *Lavatera trimestris*, the glowing orange *Erysimum Peroffskianum*, *Omphalodes linifolia*, and the Shirley and Opium Poppies. Of climbing plants a number have been or are blossoming, such as the *Wistaria*, *Honeysuckle*, large-flowered *Clematises*, *Cobaea scandens*, *Jasmino*, *Clianthus puniceus*, *Solanum jasminoides*, *Morning Glory*, the vivid scarlet *Tropeolum speciosum*, whose vermilion trails light up the sombre foliage of evergreens, the yellow *T. polyphyllum*, the Indian-red *T. pentaphyllum*, and the crimson and black *T. tricolor*, which in the early days of the month I saw rambling over a Rose bush in a sheltered garden. With the heat of the first week of June Roses matured fast, and many have been the basketfuls of exquisitely tinted Teas and deeper coloured Hybrid Perpetuals that have been culled for indoor decoration. Lovely as they all are, perhaps there is no more beautiful Rose than a half-open, shell-pink blossom of Viscountess Folkestone, nor a sweeter one than *Socrates*, with its delicate essence. There are several fine specimens in the neighbourhood of the little single white Rose, *R. polyantha simplex*, which is now in full bloom. In one case the Rose has ascended a tree about 15 feet high, which has since died, and has formed an immense head, from which cataracts of bloom fall downwards at every side. The charming little Rose de Meaux is also in flower, and the old *Magnolia* Rose, one of the first introductions of the Teas. *Rosa macrantha* is in bloom, and early in the month a few blossoms still remained on the large single white *Rosa laevigata* at Kingswear, but May is the month when this Rose bears the bulk

of its blooms. Of the Penzance Briers, the pale fawn Lady Penzance is of an extremely delicate tint. In Mr. Archer-Hind's garden at Coombe-fishacre, among many beautiful and rare flowers in bloom the following were included: the pale flesh *Gladiolus carneus*, *Bloomeria aurea*, the lovely, but evil-smelling *Codonopsis ovata*, *Malva Munroana*, the scarlet-flowered *Ourisia coccinea*, a small blue *Lathyrus*, a splendid specimen of *Iris Gatesi*, a foot in diameter; *Hedysarum multijugum*, *Caccinia glauca*, *Geranium sanguineum album*, *Oenothera pumila* with tiny golden flowers, a fine plant of the white *Ostrowia magnifica* nearly 6 feet in height, *Borago laxiflora* with pretty pale blue pendent flowers of small size, *Gentiana asclepiadea*, which was growing and flowering well by a large patch of Marsh Fern, *Callirhoe Papaver*, *Lindelophia spectabilis*, and a strong colony of *Cypripedium spectabile*, which was blossoming grandly in a spot not far removed from the water. S. W. F.

ROSE GARDEN.

SOME BEAUTIFUL TEA ROSES.

I CANNOT separate many of the so-called Hybrid Tea Roses from the Tea-scented group; therefore if a few are mentioned in these notes that are usually classed with the Hybrid Teas it is because in my opinion they properly belong to the Tea-scented tribe. Why such a dainty Rose as Kaiserin Augusta Victoria should be expunged from a box of Teas I fail to see; and surely the exquisite new Rose Mme. Cadeau Ramey, with its lovely high-centred rosy flesh-coloured blossoms and delightful yellow shading so peculiar to many recent novelties, has a right to a place among the Tea Roses. But as this matter only concerns exhibitors, it is of no material consequence to the thousands of individuals who grow Roses to adorn the garden and house.

This has been a glorious season for Tea Roses. I do not remember any year when their innumerable tints were more beautifully developed than this. The quality has also been good. Something like 6000 blooms were staged at the National Rose show at the Crystal Palace this year exclusive of the classes for garden Roses, and of this number nearly one-half were of the Tea-scented section. Of such popular favourites as Marie van Houtte, Anna Ollivier, Mme. Lambard, Hon. Edith Gifford, and others I do not propose to speak now, but shall confine these notes to novelties or little-known kinds that if space permitted should be found in every collection. The general public is not cognisant of the bewitching rosy red and glowing lake colours so beautifully blended in the variety Duc de Luxembourg, or the demand for it would be very great; and when it is remembered that the growth is equal to that of *La France* or Viscountess Folkestone, no further commendation is needed. *Souvenir de Lady Ashburton* is another grand variety. The many hues prevailing here amply justify the phrase Rainbow Rose that I have seen applied to this kind. I was convinced from specimens seen last year that the white Maman Cochet would be a favourite not only with exhibitors, but with the general Rose-growing public. It does not split in the centre so much as the original kind; at least that is my experience of it so far. As to colour, it is not snowy white, and I am not sorry for it. If anything enhances the beauty of Tea Roses over their more robust relations the Hybrid Perpetuals, it is the delicate hues that they are so frequently suffused with. In this case the three or four outer petals are often wholly pale pink, and

the remaining high-centred, exquisitely-formed part is a beautiful white, with a very slight shading of pink. The immense wing-like outer petals even in the original variety are unsurpassed by any Rose, but when these are of a pink colour and the remainder of the bloom almost pure white, it is not a difficult matter to comprehend the full beauty of the new-comer. Of *Baronne Ada* I have formed a high opinion, and believe it will prove to be a valuable variety. It is somewhat in the way of *Innocente Pirola*, but of a deeper tone of soft creamy yellow. *Empress Alexandra* of Russia was conspicuous both at Colchester and Manchester. It gives just that finish to a box of Teas that was much required. In point of colour we have not had such a distinct Rose for many years. I cannot say I like to see the red Teas, such as *Francis Dubreuil* and *Souvenir de Thérèse Levet*, exhibited among the more delicate hues, but with *Empress Alexandra* it is different. Although high in colour it is more of the *l'Idéal* shade, and of these there is room for many more. *Souvenir de Jeanne Cabaud* is, to say the least, very distinct, but like many of the true Teas its beauty is not revealed until the blossoms are cut, the latter having the bad habit of hanging their heads. The colours, however, are most beautiful, merging from yellowish apricot to a centre of pink and carmine. There is one Rose that if raisers and hybridists could improve in growth and hardness they would confer a lasting boon upon the Rose world. I refer to *Souvenir de Mme. Levet*. Just imagine a perfect flower of W. A. Richardson—not those with white edges, but a highly-coloured blossom of a regular form and a little larger, and we have a fair idea of this lovely Rose. *Medea* has been better shown than any other yellow this year, and there is no mistaking its vigour, for it grows as freely as *Marie van Houtte*. The rich old-gold colour of *Mme. E. Helfenbein* and the salmon-white, rosy tint of *Souvenir de Gabriel Drevet* are the predominant features of two really excellent Roses. The beautiful coloured plate of *Souvenir de Catherine Guillot* which appeared in THE GARDEN last year has made the general public familiar with a splendid Rose, and the same may be said of *Mme. Jules Grolez*, a Rose that I prefer to Mrs. W. J. Grant. I thought at one time that *Jeanne Forgeot* would be a bad grower. I knew that the flower was superb, the long blooms making it so very distinct, but in vigour it has surprised me, and I now look forward to it becoming a very valuable Rose. *Josephine Dauphin* is really beautiful. It was introduced as a rival to *Niphetos*, but I cannot see that it merits this distinction. It is a different style of flower, and the colour is quite lemon-yellow. I am pleased with the creamy white *Enchantress*. The growths produce such immense trusses of bloom, that each one would be a fair bouquet in itself, and as to vigour, it stands in the first rank. Possibly not since *G. Nabonnand* was introduced have we had a finer garden Rose. Mention was recently made of *Mme. René Gerard*, a Rose that has come to stay, and I have also found *Souvenir de J. B. Guillot* to be perfectly distinct in colour.

Among the loveliest of the comparatively recent kinds the following stand out very prominently: *Souvenir de Mme. Eugène Verdier*, *Francis Dubreuil*, in bud most beautiful; *Sylph*, one of the hardiest and best; *Antoine Rivoire*, *Ferdinand Batel*, *Meta*, possibly a seedling of *Luciole*; *Emile Gonin*, in the way of *Mme. de Watteville*; *M. Ada Carmody*, a flower that should be as fine as *Cleopatra*; and *Sweet Little Queen*, a Rose somewhat in

the way of Vicomtesse Decaizes. Of older Roses that merit a word of praise, Mme. Abel Chatenay and Souvenir du President Carnot undoubtedly take first rank, and others following closely are Le Soleil, Mme. Henriette de Beauveau, a lovely yellow, with a suffusion of delicate pink, and a climber combined; and Germaine Trochon, an excellent kind to grow as a bush, although described as a climber. Zephyr is exquisite and a splendid grower, and Dr. Rouges also. What a lovely colour is Mme. Chauvry! I think of all these nankeen or coppery Roses this one is the loveliest. Princesse de Venosa and E. Veyrat Hermanos are both good kinds of the Comtesse de Nadailac type. If they open well in this country (which at present I have found to the contrary) they would be first-class Roses. Rainbow is really a most constant striped Papa Gontier, and for those who like these Roses it will be found an acquisition. Kaiserin Friedrich, a tinted Gloire de Dijon, and Mme. Pierre Cochet, the bud the colour of a Seville Orange, are also worthy of note.

PHILOMEL.

The dearth of dark Roses.—An examination of the long lines of boxes at the recent Crystal Palace show showed that either this year was not suitable for crimson and dark-coloured Roses, or that really they are more difficult to grow than are those of light shades. Abel Carrière, A. K. Williams, Charles Le-febvre, Comte de Raimbaud, Duke of Edinburgh, Dr. Sewell, Earl of Dufferin, General Jacqueminot, Jean Soupert, Horace Vernet, Louis van Houtte, Prince Camille de Rohan, Prince Arthur, Sir Rowland Hill, Sultan of Zanzibar, Victor Hugo, and Xavier Olibo were noted, but were conspicuously rare. I have known some of the above obtain the coveted medal for being the best bloom in a show, and not an exhibit without a fair proportion of them. Certainly they are not the least attractive of Roses either at an exhibition or in the garden. At the exhibition mentioned it was in the nurserymen's classes that the specimens of dark Roses were principally found. Of late years there has not been anything specially good among new Roses of bright deep colours, and people are likely to tire of adding to their collections novelties that vary so little in tint.—H.

Two fine button-hole Roses.—Where neat, long-budded Roses are required for button-holes there are none to surpass Gustave Regis and Mme. Pierre Cochet. The former has a lovely long-pointed bud of a canary-yellow colour with a deeper centre. Many of these buds can be obtained from a single truss. It flowers as freely grown as a bush as it does upon a wall, and as a standard it will make a huge head that when in full bloom is a lovely sight. The other lovely kind in many ways supersedes W. A. Richardson, per-

haps more especially in the regularity of its colour, which is an intensely deep orange-yellow illuminated outside with reddish scarlet. Here again we have a variety serviceable in all forms. It will grow well as a climber preferably on a west wall, and as a standard it is a great success. A peculiar smooth, reddish wood is characteristic of it, and, like many of the Teas, it has fine, richly-coloured foliage. I am afraid it would not be very hardy.—P.

EXHIBITING ROSES DIVESTED OF THEIR BUDS.

FROM frequent remarks overheard at Rose shows, the present style of denuding a show bloom of all its buds is anything but popular



Tiburnum macrocephalum. (See p. 78.)

with the general public. Indeed, the attraction of exhibitions always seems to be centred in the garden Roses where a Rose is shown in its natural beauty. Why should not classes be formed wherein so-called show Roses could be exhibited surrounded with their buds? I know this stipulation would have to be enforced, as the rage for large flowers would naturally compel exhibitors to disbud. This difficulty could be surmounted by offering prizes for the best natural truss or trusses of so many distinct kinds. This class would be highly serviceable to would-be purchasers, as they could then see for themselves those kinds which were likely to be most useful to them for the garden, for I take it that it

is only the exhibitor who would be content with one bloom upon one growth when it is possible to obtain two and three and even more. A friend of mine related quite recently a circumstance bearing upon this point. Many years ago when real trusses were shown, he had in his box a truss of Mme. Bravy. This truss consisted of three fine Roses, and some individuals tried to disqualify him, saying that he had more than the specified number. This was not so; he had twenty-four single blooms or trusses, according to the wording of the schedule. Needless to say, this truss considerably helped him to secure the prize. I should like to see this matter taken up by the National Rose Society. More space would be required for such specimens than is now necessary for single blooms, the full beauty of each truss being then brought out more prominently. Exhibitors would do well also to deepen the lids of their boxes in order that such trusses could be cut from 12 inches to 15 inches long. It is absurd to offer prizes for collections of garden Roses and exclude Hybrid Perpetuals. Are not some of these, such as General Jacqueminot, Mrs. John Laing, &c., also our best garden Roses? I maintain that if a Rose is strong to start with and is planted well in good soil, it can support several blooms on a single growth as well as it can one individual specimen, and a great gain is effected by prolonging the season of flowering of some of our very best varieties. P.

GARDEN FLORA.

PLATE 1233.

COLEUS THYRSOIDEUS.

(WITH A COLOURED PLATE.*)

FLORAL attractiveness is not characteristic of the genus *Coleus*; indeed, the only one of the fifty species hitherto known which has any known horticultural merit is *C. Blumei*, a native of Java and the progenitor of the many sorts of ornamental-leaved *Coleus* grown in gardens. By the way, it may be pointed out, *apropos* of the attention garden hybrids, crosses, &c., are now receiving, that *Coleus* as represented in gardens is one of a considerable number of cases of extreme variation, brought about solely by selection and not the result of hybridisation. *C. Blumei* was introduced from Java, through Belgium, by Messrs. Low and Co., of Clapton, about fifty years ago. A figure of it was published in the *Botanical Magazine* in 1853 (t. 4754). *C. Verschaffeltii* is a variety of it.

Although several other species of *Coleus* have been introduced from time to time and tried as garden plants, generally under the name of *Plectranthus*, they have not been favourably received. *C. aromaticus*, with green, succulent, aromatic leaves, is sometimes met with in the gardens of the curious. The species represented in the accompanying plate has several commendable characters. It forms a large, shapely herbaceous shrub under greenhouse treatment and produces its thyrsoid flower-heads in winter. The colour of the flowers is a bright gentian-blue, and they are produced abundantly and continuously for about a month, unless crippled by a severe London fog. Some of the flower-heads produced last January at Kew were 9 inches long and proportionately wide.

For the discovery of this plant we are indebted to Mr. Alexander Whyte, F.L.S., who sent dried specimens of it from British Central Africa to the Kew herbarium in 1897. A few seeds were secured from these specimens, and the plants thus raised flowered first in January, 1898. Mr. Whyte found it on the Nyika

* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



Plateau at 6000 feet elevation, and he described it as "a showy blue labiate, growing in damp situations." Last summer the plants were grown in a greenhouse, where they formed bushes 2 feet high and wide. This year some plants raised from spring-struck cuttings are thriving planted out in a sunny border, the intention being to lift them and plant them in pots in the autumn. This *Coleus* is worth the attention of cultivators who can appreciate an easily-grown plant which produces really attractive bright blue flowers in midwinter.

W. W.

THE WEEK'S WORK.

HARDY FRUITS.

STRAWBERRIES.—Those who wish to have good crops of the finest and earliest fruits next year will have raised a sufficient quantity of plants to put out on wall borders where the soil has been well dug, manured, and prepared for their reception. Early planting has a great influence for good on these plants; indeed, it is the only way in which the maximum of success may be obtained. As the plants on these borders are only expected to give one crop they may be put out thickly, and for the majority of the close-growing varieties 15 inches apart is quite sufficient. Royal Sovereign and others of its habit should be allowed 18 inches, as the extra distance will be required for air, should the season of ripening be a wet one. In planting take care that the ground is firm, either from being well trodden or from having been allowed time to settle naturally. Personally, I like to plant on ground which has been bastard-trenched during the previous winter or spring and from which a light crop has been taken in the meanwhile; indeed, one may take almost any sort of crop, such as early Potatoes, Lettuces, and even Peas, from the ground without doing it any harm, but I avoid using the



Viburnum Tinus. (See p. 78.)

plots as seed-beds for any of the Brassicas, as these leave the ground in a dry and poor condition unless they have been transplanted quite early. Showery weather is the best for carrying out planting on soil which will admit of the necessary treading without becoming pasty, but one cannot always wait for weather and some soils are best left alone when at all wet. See that

the soil about the roots of the young plants is in good condition as to moisture, then they will have what they want in the way of a good start. If, in lining out the ground, the corner of a hoe is used, take care that the drill thus made is not deep or, if it is so, that the plants are kept well up so that the surface of the ball is only just buried when the plant is made firm, for if the crowns are let too far into the soil either when planting or through settling afterwards the plants will be spoiled. Water well in after planting and see that there is no neglect in this while the weather remains dry, or until the plants become established. Having selected for the borders the best of the young stock and planted them, go on planting the main beds or plots. These, being intended to last for three or four seasons, will be planted more thinly than on the borders, the strong growers being given 2½ feet between the rows and 2 feet from plant to plant and the weaker ones 6 inches less each way. These are good average distances, but must not be looked on as arbitrary for every garden, as the character of the growth varies with the soil and must be allowed for to suit individual cases. The crop for the year being over and runners obtained sufficient for all needs, it will be advisable to cut away all superfluous runners and clear them and the roughest of the mulching off the plots on which the plants are intended to remain for another year's fruiting, for nothing looks worse than a weedy and untidy Strawberry bed after it has been stripped of the nets, besides which it is not giving the plants a fair chance to allow the crop of runners to remain on them any longer after the opportunity of clearing them occurs.

SUMMER PRUNING.—Having finished the summer pruning of wall trees, it is well to go right on to the pyramids and all other trained trees in the open garden, getting the work completed as soon as may be, so that the swelling fruits shall have all the advantages of exposure to sun and air. Growths reserved to full length for filling up the bodies of the trees or for extension of the leads should be tied into position before they become hard. They will then acquire the form which it is desirable they should take, and trouble at the winter training will be saved. If any leading growth is not going away so kindly as wished for, the side growths on the branch should be repressed more rigorously to encourage the leading shoot and preserve or obtain a proper balance.

SUCKERS.—On wall trees especially, and on others which occupy ground that is dug over occasionally, suckers often appear and are a great nuisance. If left until now, just as the wood is getting hardened, they can be dealt with more satisfactorily than they can earlier when soft and brittle; they should be opened out and traced downwards until arriving at a single stem, or, better still, at the junction with the root, and then be bodily removed. This will prevent any further trouble with these robbers for the current year. Those trees which are especially persistent in sucker production should be marked down for more drastic treatment during the winter, when it will be safe to open out more thoroughly and trace each bunch of suckers to its origin.

FIGS.—Fig trees, though late in starting growth, grow rapidly, and the soft, pithy wood is easily injured in high winds, so should be secured early to its supports. Surplus shoots may either be stopped or entirely removed, whichever seems to tend most for the benefit of the fruits which need exposure to give them the needed colour. In the extreme south of the country it is usual and wise to allow a considerable amount of latitude to the growth of outdoor Figs, and breast wood may be allowed to hang down the face of the

trees, thereby increasing the number of growths preserved and also the crop given, for these breast-wood shoots acquire a short-jointed and free-fruited habit in a favourable climate, but in more northern latitudes they have to be rigorously repressed and the trees trained thinly if we are to expect any fruits from outdoor trees.

PEACHES.—These should now be taking on



The Guelder Rose (Viburnum Opulus var. sterile). (See p. 78.)

colour, and, to help them, should be well exposed to the sun by tying back if necessary any leaves which hang over them. The size of the fruits will be greatly increased and the trees benefited by heavy waterings of weak liquid manure during the period when they are taking their final swelling; the mulching, too, should be increased if not thick enough to give a uniformly moist covering to the surface roots. This and the remarks on watering will apply now more forcibly than ever to all fruit trees carrying good crops, and especially to wall trees without a southern exposure.

PESTS.—When the bigger fruits begin to ripen there are pests ready always to attack them, and these are more difficult to deal with in the open air than under glass. One of the worst is the wasp, which comes in such numbers and so suddenly as to fairly nonplus the unwary. I have very little faith in the method of putting various attractive potions, such as beer and sugar or treacle, in bottles to drown or stifle the pests, for, though the numbers which are so killed are great, the baits so provided probably attract by their smell many which would never come to the trees. It is a difficult question to deal with, and one gets to one's wits' ends at times to know what to do for the best, but certainly the most effective measure is to leave nothing undone that will lead to the discovery of all nests within a radius of a mile or so, and to destroy their inmates with a dose of cyanide of potassium solution placed far enough back in the nests to be harmless to all but the wasps, for the cyanide is a deadly poison and must be handled with care. Earwigs often attack stone fruits, but may easily be trapped by the use of Bean stalks or short pieces of Bamboo stuck among the branches and blown out into a bottle of water each morning. Of mice I have given early cautions which can only be borne in mind for present application. Persistent trapping should have reduced them considerably, and there is no wholesale way of dealing with them.

CORNUBIAN.

KITCHEN GARDEN.

EARTHING UP LEEKS.—Where Leeks are required for use early in the autumn, plants which were raised in heat in January will by this time have grown to a good size and may be partially earthed up. If several rows are growing in one wide trench great care will be necessary in order to prevent the soil falling into the hearts. A good

way to accomplish this is first to tie a band of soft matting round the lower part of the plant and then to use a thin board, this being held by one man against the row while a second puts in the soil with a spade, the board being afterwards lifted gently out and the soil worked around the stems with the hand. Where only one row of plants is grown in each trench, it may be earthed up so far similarly to Celery. Leeks are very thirsty subjects; therefore it will be advisable to give the trench a good soaking with farmyard liquid the day previous to earthing up; this will enable the plants to swell at the base during the final stage of growth.

TRANSPLANTING COLEWORKS.—The plants from the first sowing will soon be large enough for putting into their final quarters. Where no rain has fallen, however, it will be best to exercise a little longer patience, as if the plants in the seed-bed were well thinned out when comparatively small no harm will result from the delay. As before stated, I have always planted a quarter from which old Strawberry plants have been cleared, and then drills are not really necessary, as the ground beneath the surface being firm retains the moisture well. Where planting is performed on loose, freshly-turned ground, however, drills will be necessary. Plant 15 inches apart all ways, and water home, keeping a sharp watch for underground grubs, which are often very troublesome amongst newly-planted Coleworks. It is of no use whatever applying lime to the surface for this pest, nothing but searching beneath the surface in the vicinity of the stem being of any avail. It is a good plan to make several transplantings even from this first sowing. As the second-sized plants left in the seed-bed get large enough, the latest sowings, which will be ready for putting out in September, will afford nice useful heads for use during January and February. I like to have the seed-beds in a cool, semi-shaded position.

SCARLET RUNNER BEANS.—Special means must be adopted during absence of rain to induce not only a free, vigorous growth, but also a perfect set of pods. In the first place, the rows on both sides should be well mulched either with manure from the farmyard, or, failing this, a good thickness of old Mushroom manure, or even grass mowings. This will conserve the moisture, which must be applied to the roots with no niggardly hand. A good soaking once a week will be none too much, giving farmyard liquid of good strength. Where practicable I would always give the haulm a good wetting at eventide twice weekly in dry, parching weather. This is best done by means of the hose-pipe or garden engine. Where the pods have arrived at a usable stage they must be kept picked tolerably close. Successional sowings now coming on apace should be treated similarly as regards mulching and watering with liquid manure. On light or porous soils the previously recommended plan of sowing in trenches containing a good layer of rotten manure will this season prove its value. Everyone has not an inexhaustible supply of tall rods, but ordinary 5-foot or 6-foot Pea rods answer well, the haulm being pinched when the top has been reached. The old Scarlet Runner is still hard to beat for freedom of setting and swelling its pods in a dry season.

VEGETABLE MARROWS.—Both bearing and successional plants will now need regular attention, as the young tender Marrows are much appreciated in the dining-room at this season. Marrows as a rule are used in a much younger state than formerly, and it is well that it is so, as by timely easing the plants of their burden growth is strengthened and the season considerably lengthened. Where the earliest planting was made in frames from which new Potatoes had been lifted, the roots being considerably elevated above the ground-level will need an abundant supply of water, or a premature collapse must be expected. Vegetable Marrows will take manure water as strong as the majority of vegetables, but after using liquid manure from the farmyard I like to go over the plants afterwards and wash

the foliage clean with pure water. More recently-planted lots occupying a position on the level or on slightly raised mounds of loamy compost can easily be kept in a growing condition by timely liberal mulching and regular supplies of water. Plants under these conditions produce abundance of fine-flavoured Marrows over a long period, their constitution being hardy. Where available I would always give these successional batches of plants a semi-shaded aspect, having found such to suit them well, especially in hot, dry summers. Plants occupying small pots or boxes may yet be planted out in a good border, as at this date they soon start into free growth and become fruitful, provided the above-named cultural details are carried out. Pen-y-byd is a useful prolific Marrow, and very suitable for amateurs. J. C.

FLOWER GARDEN.

JULY, 1899.

PROBABLY many gardeners have heard the story of Diocletian which is told on good contemporary authority. This emperor, living in the fourth century of the Christian era, had the good and rare fortune after a prosperous reign to retire from the government of the Roman world with his head on his shoulders. He went to his native place in Dalmatia and gave himself up to the pursuits of country life, especially gardening. Things did not go on so well at Rome after he was gone, and an influential deputation waited upon him, begging him to come back and put matters straight again. The ex-emperor pointed to a large garden filled with Cabbages—the gardening of the Romans was mostly kitchen gardening—“All those Cabbages,” he said, “and many more I have planted with my own hands; and I can say this, that no one who has once learnt the pleasure of gardening, as I have, would ever be willing to exchange it for the empire of Rome.” So much for the comparative pleasure of absolute power and gardening in the opinion of one who had tried both. Perhaps there may have been a thought of the sword of Damocles behind Diocletian’s estimate, but if ever there was a month to make gardeners contented and happy it is July, 1899. It is true the year has had its drawbacks for them; the sharp frosts of April and May did much damage to flowers, amongst other mischief destroying the young shoots of the *Fraxinella* and the embryo flower-buds of *Pæonies*. Then came the deluging rains and thunderstorms with hail in June, laying everything flat and starting a vast crop of weeds, but now the weather has settled down—and as St. Swithin’s is past I may say this—into the most splendid July that we have had in Cheshire since 1868. The bright suns and warm nights coming when the soil was well filled with moisture have brought out the finest crop of summer flowers that this garden has ever seen. I can only give a few words to a few of the most conspicuous of them, merely adding that all the others which this soil and climate can grow are here too. Delphiniums are past their best and have enjoyed the sun, which has prevented the colours from running, as they are apt to do in sunless seasons. All those at Edge are home-raised seedlings, and nearly all are single. A handful of seed is saved from the best flowers every year and sown broadcast on spare ground. A few of the best are selected to supersede those in the borders either of less merit or worn out. Large flowers of pale Eton blue or of dark sky-blue of the true blue strain and with well-marked white or black centres are aimed at. It is also a merit for the flower-stems to branch nearly to the ground, and a height of 6 feet is

better than one of 3 feet or 10 feet, but I find the general result of this treatment very satisfactory, and seldom see a better set than I grow at home. *Verbascum olympicum*, of which I have at least forty in flower, is not in any danger of being overlooked. They grow 8 feet high, presenting a solid cylinder of flowers 4 feet long and 1½ feet across and pointed at the top. The basal leaves cover a square yard, and, of course, smother anything beneath them, so room must be provided accordingly. A show like the present requires a mild winter preceding, or the large leaves are destroyed and the flowering spoilt. The individual flowers are much smaller than those of their rival *V. phlomoides*, which, however, does not bloom in nearly such a mass. *Eryngiums* are having a grand time. I always prefer amongst these *E. alpinum*. When it does really well, a plant 5 feet high, throwing up several stalks, each holding three or four large heads surrounded with a broad border of soft blue filigrane work, is very ornamental. *Cimicifugas* are stunted in a season of drought and delight in the moisture of the soil this year. Some of the plants of *C. racemosa* have as many as thirty flowering stalks, each with three or four spikes of snow-white flowers rising to a height of 7 feet. Last year the whole genus in my garden was threatened with extinction by a serious blight, the leaves of some of the plants of more than one kind being smothered with black spots, and the flower-stalks curling up and withering in bud. In this and most other mildews I have found dusting with powdered sulphate of copper an excellent remedy. Neglected plants died, but those treated in time recovered. I have found the same treatment very efficacious for the rot in Flag Iris, with which I have been at times much troubled, and never worse than last year. *Spiræas* are unusually fine. *S. Aruncus*, which always grows large here, this year is quite of giant dimensions, and the stalks could hardly hold up the masses of flower. This is a plant in which selection from seed answers well, as in some individuals the panicles are far whiter and more elegant than in others. The roots stand division well, though a hammer and chisel or a saw are required for the operation. *S. kamtschatica* is a coarse plant for a garden border, but good for a pond-side. It becomes fertilised with pollen of some of the pink kinds, and the hybrid seedlings show a great improvement on the parent.

Wherever a piece of ground can be spared I sowed this year Eckford’s Sweet Peas. The superiority of new soil for these may at once be seen over that where they have been grown before, even though well worked and manured. I object to the many forms of this Pea which close their wings like a butterfly at rest. The broadly expanded wings show much better even if the colour is the same on the back and the front of the corolla.

Both *Lilium candidum* and *L. Martagon* are more beautiful than usual. This cannot be all due to the fine July, as the flower-spikes were formed before it came; but so it is. I never before saw *L. candidum* flower here with the stalk covered with leaves, and it is exceptionally good in all the cottage gardens about. As for *Martagons*, they are the mixed offspring of the old pale purple—the white and the dark dalmaticum—and, I may add, the *L. Hansonii*, which makes hybrids here and there amongst the others. But as the seedlings of all the varieties are allowed to come up, and the seed is occasionally gathered and scattered, there is every shade of purple and pink, from white to nearly black. I observe that the hybrids of

Hansoni make apparently good seed; the seed has come up, but none of the seedlings have yet flowered. The abundance of Roses is unprecedented, both in hedges and in gardens. Those most in favour in Edge Garden are old-fashioned kinds which admit of being pruned with hedging shears without resenting it. Such are the old Moss, the Cabbage Rose, the York and Lancaster, the Maiden's Blush, and especially a Rose called Celestial (not Celeste). The most beautiful bush now out in the shaded shrubberies is the giant Syringa (*Philadelphus grandiflorus*), making with its drooping branches a fragrant sheet of white from 10 feet high down to the very ground, upon which the lowest layer is spread. C. WOLLEY-DOD.

Edge Hall, July 17.

THE PANTHER LILY.

(*LILIJUM PARDALINUM*.)

THIS extremely beautiful and very variable Lily is one of the most amenable to cultivation of all the North American species. Represented by various forms, it has been the subject of three coloured plates in THE GARDEN: firstly in vol. xx., in which there is really little difference between the flowers illustrated; again in vol. xxix., where that distinct unspotted form Warei is shown; and thirdly in vol. xxxviii., the variety luteum is associated with two other North American Lilies, viz., *L. Bolanderi* and *L. maritimum*. The Panther Lily is found spread over a considerable tract of country in California, and is mostly met with in fairly damp spots. This should be the guide for its cultivation here, as in a cool, moist, yet well-drained soil it will soon make itself at home. The consistency of the soil does not appear to be of so much importance, for while, as a rule, if it is of a loamy nature, a mixture of peat or leaf-mould and sand is beneficial, yet I have at times met with it quite at home in a stiff loam. Under these latter conditions, however, the plants did not grow quite so tall, and the creeping bulbs were more compact than in a soil with a considerable proportion of vegetable matter. The bulbs of this Lily just referred to are of a peculiar rhizomatous character, a feature common to a few other North American kinds. When in a thriving condition these creeping rhizomes form quite a dense mass, from whence are pushed up stems of varying vigour, according to the bulbs from whence they spring. Whether the flowers be many or few, they are, however, always disposed in a graceful manner, while the long wand-like shoots, with their whorls of bright green-pointed leaves, are totally distinct from any others, unless it be the nearly-allied *L. superbum*. There is a long list of varieties of *L. pardalinum*, but many of them differ very slightly from each other, and even then intermediate forms are frequently met with. The variety usually known as *Robinsoni* is the most stately of all, while *californicum* is characterised by particularly bright-coloured blossoms. It is, however, in the two above mentioned as having been figured in THE GARDEN that we find the greatest divergence from the normal form, as in *Warei* the flowers are of a warm, unspotted apricot tint, while the blossoms of *luteum* are of a rich yellow, spotted with chocolate. Though the variety *Warei* has been known for some years, it is still, I see, priced in the catalogue of the firm after whom it was named at 50s. per bulb—being, in fact, by far the dearest of all Lilies therein quoted. T.

Lilium Szovitzianum.—One of the most beautiful of border Lilies when in a flourishing condition is *L. Szovitzianum*, but it is by no means invariably met with in that state, as many bulbs fail to flower, especially the first season or two after planting. The conditions most favourable to its well-doing are a good loamy soil and a position that is not parched up at any time. In the sunken beds near the Palm house at Kew this Lily has flowered well during the present season,

and, as usual, a good deal of individual variation was to be found amongst the numerous plants in bloom. This Lily is a native of the Black Sea region, and quantities of enormous bulbs are often imported therefrom, but they are far more difficult to establish than cultivated bulbs, even though these last may be much smaller. In colour the blooms vary from deep yellow to very pale primrose, almost white, and they differ also to the same extent in their spotting.—H. P.

Tritoma citrina.—This has been very pretty the last few days, the bright clear yellow blooms on the loose spikes being much more graceful than in the larger-flowering, stiffer kinds. On a heavy soil the plants make little headway, and unless special care is taken with them they would get smaller rather than larger. The stouter growers, such as *T. Uvaria* and its varieties, are, of course, well able to take care of themselves, and the tall, handsome spikes look well and hold their own among rough herbage and grass provided they are given a good start, by taking out large holes, filling with good compost, and planting them in large established pieces. The stations must be kept free of weeds for a couple of seasons until they have a good hold, and the spikes should be rubbed out the first season as soon as seen. *T. citrina* has much narrower foliage and is a weaker growing plant altogether, and anyone trying to establish it from the roots sent out from hardy plant nurseries will be wise to pot them up and grow them on a little while in the cool house before finally planting out with the ball entire just as the roots are feeling the pot.—SUFFOLK.

NOTES ON HARDY PLANTS.

Aster diplostephoides.—For seven or eight years I have grown this rare plant, and only now, for the first time, have I got one fine flower. I am sure that for at least two years I grew it in a too shaded position. Where not known it may seem an unpromising flower when opening, and for a week after it has opened; after that time the ray florets straighten out and the disc lightens up with yellow, the whole head (2½ inches to 3 inches across) glistening in yellow and purple. I wonder if it is a variable species? The best description of it would be, perhaps, to compare the foliage to that of *Inula glandulosa*, and the flowers to those of *Aster pyrenæus*, only bigger and yet more refined.

Ostrowskya magnifica.—From five years' experience of this plant, I am satisfied that for success with either big roots or young stock they should be set early—early enough to get the benefit of the warm condition of the soil in the autumn or late summer. For the best results I would plant as early as July. The tuberous roots do not at most make much fibre, but what they do make is essential to sustain the spring growth into summer and to the flowering stage. Such fibrous roots may not be produced in winter or when late planted, because not only is the time less propitious, but the roots have become less responsive from their having become more dry or hide-bound. The results of too late planting are a sudden and complete collapse of the herbage in May or earlier.

Veronica lycopodioides.—It may be worth noting that this pigmy kind, nearly related to the Whipcord section, is flowering profusely this year in the case of a specimen that is 8 inches across and established in its present position for four years. It would be reasonable to suppose that all the Whipcord kinds were shy bloomers, but this points to the possibility of their flowering well in some seasons. The milk-white flowers of this kind are of starry form, have black anthers, and are borne at the apex of the twigs in fives. I grow it in sandy soil and in the fullest sunshine.

Phyteuma comosum (L.).—I believe it is not generally known that this is a very variable species—variable as regards leaves, flowers, colour, and stature, also date of flowering. I have grown it in quantity now for many years,

and my plants came from one place. At present some plants are lovely, others are in seed, while yet others may be two weeks before they flower.

Saxifraga mutata.—I hope your correspondent "S. A." (p. 32) will forgive me if I wrongly assume that from the words he employs in speaking of the living or dying qualities of this plant he may not be aware that the species is of but biennial duration. The plant is a great seed-bearer, and seedlings are more easily raised than in the case of most Saxifrages. You may sometimes keep a plant more than two years, but that will only occur when from some cause the plant has not duly flowered. J. WOOD.

Woodville, Kirkstall.

FLOWER GARDEN NOTES.

ON hardy plant borders of large size where both species and varieties of the same are strongly represented there are always a coming and going of plants, and at the present time (June 28) many things that were some time ago in full beauty are now past their best and have to be cut over and removed or partially headed back and otherwise attended to with the view to a second display. Pyrethrums come under the latter class, and should receive, if possible, immediate attention. Remove all old flower-stems and any dead foliage, lightly prick the soil about the plants, and give a good soaking of liquid manure, or, if this is not obtainable, mulch with manure and soak with clear water. There was a query recently as to the relative merits of autumn v. spring planting. I should always practise the former, whether in the case of seedlings or plants increased by division, having found that a thorough establishment of the plant for late spring or early summer flowering is thereby better obtained. In removing old flower-spikes on such things as *Campanula persicifolia*, *Verbascum phoeniceum*, *Lupinus Foxi* and others, care should be taken not to cut too low, or tiny spikes pushing for successional blooming are apt to be taken away. Much depends on the treatment that can be given them immediately the first flowering is over. Failing rain, they ought to receive, as in the case of the Pyrethrums, a thorough good soaking. Given this and good stuff below for the root-run, the recuperation is rapid and satisfactory. The strain of tall *Antirrhinum*s with large spikes and splendid flowers throws out a profusion of side-shoots that will furnish a plentiful supply of bloom of very fair quality if the central portion of the spike is removed before the formation of seed. Pinks like *Anne Boleyn* and *Mrs. Sinkins* are over and flower-stems cut hard down, the plants even without the bloom presenting a bright appearance, especially when contrasted with other things, as, for instance, *Geum coccineum*. Writing of contrasts reminds me to note one of the best things I have this year in bold clumps of *Sisyrinchium striatum*, filled in (in a very large bed) with purple *East Lothian Stocks*. The flower forming the central clumps is not very striking so far as its individual blooms are concerned, but the tall spikes and the abundance of flower that is very well sustained give a bold and very pleasing effect when associated with the purple Stock. It is one of the few plants that can be confidently recommended for very poor soil, although at the same time it pays for good culture, the spikes under such circumstances being much larger and the flowering period much longer sustained.

ANNUALS.—Given thoroughly well-prepared ground with early thinning so that the plants stand well apart (at least 12 inches each way), annuals give a far better display if allowed to bloom where they are sown than if they are transplanted, only in the latter case the flowering is earlier. In outlying beds in pleasure grounds and the wild garden a very fine and enduring display can be obtained by the use of annuals if a good selection is made and the ground is well prepared. Just at present one of my best beds is a mixture in bold clumps of the white spiral Candytuft with *Linum grandiflorum*; the latter

stands well above the Candytuft and the contrast is decidedly pleasing. In cream and orange shades two very effective things just at present are *Calendula Meteor* and *C. Orange King*. Like the perennial *Sisyrinchium* above mentioned, these *Calendulas* are splendid plants for dry soils, and if decaying blooms are nipped off they will flower right away till the advent of frost. Another yellow flower just at present looking remarkably well is *Coreopsis coronaria*. *Godetias* make a fine bed in variety, and look better in this way than when mixed with other things. *Gloriosa*, *Dunnetti* and *The Pearl* are good sorts. *Gaillardias* and *Salpiglossis* also hardly require anything else with them, although in the case of the last named I have had some beautiful beds with occasional plants of *Nicotiana affinis* dotted among them.

LILIUM CANDIDUM.—Some few weeks ago I noted an experiment tried with the above Lily with the view to check the disease that annually appeared in the foliage and practically crippled the plants, viz., shifting the stock to a north order, and am glad to say it has proved a decided success. The plants have not been so good for years; many of the stems are 6 feet in height, and there is an average of twelve blooms to the stem. There is a suspicion of disease occasionally at the extremities of the leaves, but not sufficient to render the foliage at all unsightly.

VASE AND BOX PLANTS have wanted a considerable amount of attention since they were planted, and if from any cause watering was neglected or the water insufficiently applied, they very quickly suffered. *Tropeolum hederifolium* has proved itself an excellent trailer and flowers freely, but, save that it is distinct in foliage, I do not see that it is any improvement on the old *Ball of Fire*, which grows quickly and is very free. These, with *La Florifera* and *Mme. Crousse* Ivy-leaved *Pelargoniums*, with blue and white *Campanulas*, and an occasional bit of *Musk*, are among the best of the trailers. For the back or centre respectively of large boxes or vases an occasional dwarf sturdy *Canna* with plenty of clean, healthy foliage is very attractive among *Marguerites*, *Fuchsias*, *Pelargoniums*, and other things. E. BURRELL.

Claremont.

THE DOUBLE MEADOW SAXIFRAGE.

SAXIFRAGA GRANULATA, which shares with *Ranunculus aconitifolius* fl.-pl. the pretty appellation of *Fair Maids of France*, spreads quickly when planted in the grass. In the spring of 1897 I saw growing beneath some spreading Beech and Chestnut trees on a lawn a plentiful carpeting of white flowers, which proved on nearer inspection to be the double Meadow Saxifrage. I was informed that the spot where they were growing had formerly been a garden, and that some fifty years ago plants of the Saxifrage had been introduced. The garden has disappeared for many years, and its place has been taken by level turf, but the Saxifrages remained and still continue to increase in number. Few plants will grow and flower beneath a Beech tree. Here and there *Wood Hyacinths* may be found doing so, but more often than not the ground beneath the Beeches is bare of flowers, yet these Saxifrages appear to revel in their site and spread from the bole to the outer limits of the branches. I received a small clump from this abundance and planted it beneath a spreading Hazel growing on a rough lawn near the wild garden. Last year the clump blossomed well, and this year several plants appeared in the grass about 6 yards distant from the original plant, and flowered freely. These new arrivals are scattered over about 2 yards of ground. A stranger thing than this, however, subsequently happened. I told a neighbour, who resides about a quarter of a mile as the crow flies from my gates, of the beauties of the Meadow Saxifrage for growing on the grass beneath trees and promised a root, which was to be planted beneath a Beech. A

day or so later I received a message saying that there was a strange flower underneath the Beech on the lawn, and would I come and look at it. I went up and found a plant of Meadow Saxifrage with two blossoms on it beneath the tree whose branches swept the turf. I presume that the plants which have sprung up in my garden 6 yards away from the first importation owe their position to seed from the first-comer being blown there, but the quarter-of-a-mile journey through thickly-timbered ground, some other agent than the wind must be responsible for, since even Thistle-down would scarcely in one case out of a hundred find its way uncaptured through the maze of branches. Doubtless the transportation was effected by a bird, but it seems curious that the bird should have anticipated the recently-formed intention as to have dropped a seed in 1898 in the exact spot where a year later it was decided to grow the plant, which was then, unknown to the



Heuchera brizoides. From a photograph sent by Mr. H. Staples, Spondon Old Hall, Derby.

parties interested, about coming into flower just where they wished to establish it. How infinitely smoother life would be if some kind providence would but follow the example of this thoughtful bird and arrange things beforehand for us, so that fulfilment might be awaiting our wishes as soon as they assumed form. The plant which I introduced in 1897 was the only one of its sort in the whole valley, and, as far as I know, there are none of the species, single or double, within two miles, so that there is little probability of the germ of the newly-discovered plant having originated elsewhere than in my garden.

S. W. F.

Seedling Pentstemons.—These fine herbaceous plants are very easily raised from seed, and from a collection of named varieties of which I saved the seed two years ago I have some very

pretty and highly-coloured forms. The bright reds, with deep magenta and crimson throats, make a very fine show when they have grown into good clumps a couple of feet or so through them, and these may be kept tidy by thrusting a few branching stakes among them. So treated they are very fine in the herbaceous border, while a group of one variety, especially if it is a good one, makes a splendid and showy bed of itself.—H.

THE HEUCHERAS.

WHEN at Kew some three years ago I was struck with the plants of *Heuchera sanguinea*. I saw in flower there, so I wrote to M. Lemoine for a plant, and at the same time I ordered a plant of *H. alba* and one of a hybrid called *H. brizoides*. These were planted on a border with a gravel subsoil and about 4 feet from a wall facing east in South Derbyshire, where they have since remained undisturbed. In order to explain the state of affairs at the present time I enclose a photograph of the three plants in question, from which you will see that *H. alba* has not flowered at all this year, *H. sanguinea* has put up three or four feeble spikes, while *H. brizoides* is a mass of bloom. This plant seems to me most desirable from every point of view. It requires no protection in winter, and the flower-spikes are more robust and the flowers larger than those of *H. sanguinea*; they are of a pleasant shade of pink. I am afraid to say how long the plant had been in flower when the photograph was taken, but in saying five weeks I am not exaggerating in the least. The flowers last well in water, where their light and graceful style makes them much admired. Even when not in flower the handsome variegated leaves render it a very ornamental plant. The length of the spike is about 2 feet. Spondon Old Hall, Derby. H. S.

Alonsoa Warscewiczii.—This may be grown in a variety of ways, and under whatever conditions it is met with the brilliant orange-scarlet flowers are sure to attract attention. Treated as an annual—that is to say, sown in a gentle heat about March and pricked out in a frame at a sufficient distance apart to allow of the young plants being lifted with a good ball of earth—it may be planted in beds or in mixed borders, while even if sown later on in the open ground it is often decidedly attractive towards the end of the summer. Besides this, effective specimens may be grown in pots and employed for greenhouse decoration and other purposes. It is not often much grown in this way, but I was particularly struck recently with a number of good flowering examples in Covent Garden Market.—H. P.

Murray's double dark Sweet William.—In the garden of Captain Stewart at Shambellie, Dumfries, I was pleased to see a considerable quantity of this old-fashioned border flower. One occasionally meets with it, but it is not often that so many plants are seen. It is very dwarf in habit, of a deep crimson colour, and flowers quite freely. I have seen it used for edgings, for which its dwarf habit makes it very suitable. This little Sweet William is practically a hardy perennial and will with the minimum of attention live for several years. It is easily propagated. I have seen it stated that it was raised in Paisley a number of years ago. Those who remember the Auricula-eyed Sweet William in its palmy days when it was propagated by layers and sold in

named varieties may think little of this double flower, but it has for years been prized by many who care little for the points of beauty of the florist.—S. A.

A NOTE FROM ORCHARDTON, CASTLE DOUGLAS, N.B.

YEAR by year our Scottish gardens seem to gain in interest to those who admire hardy flowers. Among the gardens which have made remarkable progress in this way is that of Mr. W. D. Robinson-Douglas at Orchardton, Castle Douglas, N.B. Close to the Solway and in a warm corner of Kirkcudbrightshire, it is well adapted for experimenting with plants of doubtful hardiness. Within recent years Mr. Douglas has made a large and pretty rock garden, which gives many useful hints regarding plants suitable for the south-west of Scotland. Some notes taken during a recent visit may be of use to some.

In beds at the back of the house and with an almost south exposure are several Lilies, among these being a fine example of *Lilium monadelphum* about 6 feet high. This is a good form with better coloured flowers than many. *L. Hansoni* is also fine, and several plants of *L. auratum* seem established and increasing. They are upwards of 6 feet high. On the wall is *Rose Crimson Rambler* flowering very freely in a position in which some say it will not succeed. *Gerardia indigofera* on the same wall was very beautiful with its numerous light blue flowers. *Passiflora Constance Elliott* is again covered with buds. *Fabiana imbricata*, *Chionanthus virginica*, *Magnolia grandiflora*, *Ceanothus Gloire de Versailles*, and a nice plant of *Desfontainea spinosa* in full flower are also on the walls with a number of other shrubs. In a bed is a good *Choisya ternata*. In beds by the lawn are many of the best of the hybrid *Rhododendrons* with a large number of choice trees and shrubs. One of these beds consists of *Nabonnand's Tea Roses*, among which *General Schablikine* promises well. These are young plants, and the frosts of March last did them much injury, but they are recovering fast. In another bed one observed *Mitraria coccinea*, which had been badly cut by the same frost, *Deutzia discolor purpurascens* and *Philadelphus Lemoinei*.

Near these beds is a pretty artificial lake formed about three years ago, advantage being taken of a natural depression with a rocky bottom. At one side the natural rock has been artistically used to form a high sloping promontory, and on these rocks *Sempervivums*, *Sedums* and a few hardy *Cacti* have been planted. On the grass above is *Hypericum calycinum majus*, *New Zealand Veronicas*, *Rose species*, such as *R. rubrifolia*, and for spring bloom, *Crocuses* in the grass. With a south exposure *Kämpfer's Irises* thrive admirably in the shallow water here. Several were in bloom and were very fine. *Ranunculus lingua grandiflora* was also in bloom in the shallows with *Villarsia nymphaeoides*. It is not intended that the surface of the lake should be entirely covered with plants, but bold groups of *Nymphaea Marliacea Chromatella*, *N. M. albida* and *N. M. carnea* were really fine with their large handsome flowers. At one side *Gunnera manicata* is making good progress.

From the lake, rocky steps and a path through the grass lead to the extensive rock garden, which is very picturesque with its Japanese Maples and other ornamental shrubs, its rock plants, and its little pools in which are several *Nymphaeas*. Of these, *N. Laydekeri rosea* was the best, its habit adapting it well for a small pool. *N. pygmaea helvola* was not open. *N. Caspary* is in rather too shady a place. In the

rock garden I observed a capital plant of that beautiful *Cytisus*, *C. schipkaensis*, a little Broom which ought to be more known, so pleasing are its neat habit and white flowers. A large number of plants of *Ramondia pyrenaica* are thriving beautifully. *R. serbica* is also doing well, and *Jankaea Heldreichi* has been planted with good prospects of success. Good plants of *Codonopsis ovata*, *Potentilla nepalensis*, *Dryas lanata*, *Coronilla varia* (looking well on the large rockwork), *C. iberica*, *Dianthus cinnabarinus*, *Polygonum sphaerostachyum*, and many others were thriving and happy. *Cotyledon* or *Echeveria glauca* and *Sedum Sieboldi* were very beautiful at the foot of a rock and touching the water of a pool beneath. In a bed was a number of *Irises*, among them being *I. Kämpferi*, and a good colony of *Primula rosea* occupied a place at the margin, while a spike or two of *P. sikkimensis* showed among the *Irises*. There are many good shrubs and plants on the bold and effective rockwork. The Maples are remarkably fine specimens, but so luxuriant has been the growth of some of these and other shrubs, that a new rock garden has been built for the smaller plants which might be overgrown. A cosy corner in the grounds has been chosen for a trial planting of some of the *Himalayan Rhododendrons*, most of which ought to do at Orchardton.

A long, broad herbaceous border has the back wall clothed with shrubs, among which was a grand specimen of *Buddleia globosa* covering a wide space. The walled garden is not looking so well as usual, as annuals, which are rather largely grown, have, as in most south-west of Scotland gardens, been a comparative failure this season. Fruit is scarce also. In the houses *Aristolochia elegans* was in bloom with its curious flowers. A capital strain of *Gloxinias* is grown, and one was pleased to see grand plants of several *Abutilons* in the conservatory, with a fine *Bougainvillea* and *Stephanotis* on the roof of the stove. I admired a seedling tuberous *Begonia* with small flowers and leaves, of very compact habit, which was raised at Orchardton and is often coveted.

S. ARNOTT.

SOWING DAFFODIL SEEDS.

IN reply to Mr. W. Ainslie, I may state that I make a point of sowing my seeds early in September, and I have not found that anything is gained by sowing earlier. I sow in 6-inch pots, filling them about one-fourth full with drainage, covering the same with some rough material, and filling up to one half the depth of the pot with light loam, adding thereto a little leaf-mould. I cover this with about an inch of leaf-mould, with a slight addition of silver sand, in which the seeds are sown. The pots are plunged in a cold frame, remaining there until germination takes place, which will be just as Daffodils are coming through in the open ground. It is well to allow the young bulbs to remain two years in the pots, filling up the space in the pots the second season with leaf-mould. Very little water will be needed, and it is well to cover the surface with Moss, or put a pane of glass over each pot. Seedlings take from five to seven years to come into bloom, but much depends upon the treatment given the young bulbs. The ground in which they are planted must be very sweet and friable, having been well exposed to atmospheric influences throughout the summer. The bulbs being so small must not be put more than 3 inches or 4 inches deep, and they should be set out early in September. The seeds may be sown in the open ground, and in light soils will frequently germinate very well, but the young plants are liable to be injured by slugs and are apt to be disturbed in some way. In the case therefore of seeds produced by carefully fertilised blooms it is wiser not to run the risk of

loss that open-air sowing entails. Frequently when I have any quantity of seed of the commoner kinds I sow in the open ground, choosing a place that will neither be hoed over nor dug. I have a lot of seedlings, some very good ones, that have been raised in this way. I have a bed of hardy *Cyclamens* under a Plum tree, and from time to time I have scattered a pad of seed among them. This last year a very fine double declared itself there, fine in form and coming into bloom when all the doubles were over.

J. C. B.

BORDER CARNATIONS AT CHELSEA.

AT the present time the border Carnations in Messrs. Veitch and Sons' nurseries at Chelsea are making a really fine display. The Carnations here are neither unduly disbudded nor unnaturally grown for the mere purpose of securing one big bloom per plant or the like; indeed, to an ordinary grower of such things, who will ever be satisfied with moderate-sized flowers and plenty of them, it is discouraging to see these things so disbudded that only one bloom remains. This is, of course, trying to make a show flower of one of the most valuable of summer border plants, whose very freedom is one of its claims to general notice. Collectively there are some thirty or forty beds of Carnations at Chelsea, the varieties representing only the newest and best, the general collection being grown elsewhere at one or other of the branches. If only as showing what to grow in a town garden for mid-July, these beds of Carnations, teeming with beautiful, and in a large number of instances fragrant flowers, afford a useful, if not indeed a most valuable lesson. Where such things can be associated with a fresh green lawn their beauty is very much enhanced.

Of the large collection grown it is possible only to give a selection, but those named below will be found among the best in flower when our notes were taken. The following are mostly novelties of the present season: *Hampden*, a good buff-yellow, of capital form; *Brodrick*, a fine yellow ground, prettily freckled with rosy red; *Miss Florence*, pure white, faintly touched with rose, a very vigorous grower and very strong on the stem; *Helwood*, a deep maroon self; *Asphodel*, clear rose-pink, a very fine-petalled flower; *Helmsman*, a really splendid pure white of large size and with outspreading shell-like petals, the plant also strong and free. Another fine white is *George Maquay*, though here it appears to suffer from the great heat and scorching sun. As to its form and freedom it is excellent, and doubtless in cooler quarters and purer air it would rank first-class. *Elfin* is another pure white of unusual substance and exquisite in form. *Edith Leadham* cannot be omitted from the white kinds, and, like others, it is free and a good doer, fine for massing. *Amber Witch* is of a yellow-buff tone, beautiful in form and delicately touched with rosy lilac. In the scarlet selfs, *Amy Robsart* is a fine flower, rather dark-coloured, good in form, fine in calyx, and of splendid habit. *Isinglass*, a strongly-scented flower, is another grand scarlet self almost leathery in the firmness of its petals, the latter broad and outspreading, the fine calyx cup retaining the petals in perfect contour. The *Cadi* is another fine thing of the same rich shade, and *Lady Hindlip*, even if a trifle smaller than some, is really very fine in colour, and certainly too good to be omitted from any list of scarlets. In *Francis Wellesley* we have a rose-carmine, a very distinct flower, free, and of good form. Coming to the fancies, we noted a good and distinct flower in *Artemis*, which is a scarlet, freckled and streaked with lavender. *Czarina* is also a handsome kind, also a yellow ground fancy, heavily edged with bright scarlet. *Haidee* is of a blue-mauve shade, very attractive among the host of good things by reason of its striking shade of colour, and *Saul* is a good addition to the self-yellow class. Some very fine yellow-ground *Picotees* are *Mrs. Tremayne*, *Mohican*, *Miss Violet*, and *His Excellency*, all being of fine form and very full and free. The

vigour of the present-day type of yellow grounds is also a noteworthy feature. These are some of the more important novelties, though there are others, perhaps, equally meritorious, and others, too, not sufficiently forward when these notes were taken to form an opinion of them. Besides these there were either masses or beds wholly devoted to such as Bendigo, perhaps the most remarkable Carnation ever raised in point of colour. It is also a fine grower. Cinnamon is a fine attractive flower, and Garville Gem is the best so far of the so-called heliotrope-shaded kinds. King Arthur, Knight Errant, and Mrs. Macrae are of the finest type of the scarlet selfs, the last named being an improved Hayes' Scarlet, which is saying much of any scarlet kind. Little John is also a splendid scarlet, with full flowers and perfectly smooth petals, while Ness is, perhaps, the brightest of the scarlet kinds. Joe Willet, an old scarlet kind, still finds favour; it is very dwarf and free, and for a companion of similar habit, Mrs. Frank Watts is an excellent white.

These are but a small part of the Chelsea collection of these beautiful flowers, which in their massed and varied colours constitute a most attractive exhibition in the open air at the present time.

German Iris Beauty.—This is an exquisite flower worthy of its name, and one of the prettiest I know. The standards are whitish below, veined with a velvety purple, the upper portion a deep violet-blue with white mottling. The falls are as beautiful as the lip of an Orchid, a soft bluish tinge of white with a reticulated margin of purple and deeper lines of the same colour leading to the beard. It is surprising what a recuperative power the German Iris possesses, small and shrivelled bits of root growing away freely and at once if planted in spring, while if good stout rhizomes are used they make fine flowering plants in one season.—H.

New soil for hardy flowers.—I lately noticed the good effect of new soil on Mignonette and other things in a villa garden near here. The beds appeared to have been filled up with maiden loam taken from building sites and chopped fine, and the roots, judging from the vigorous character of everything in the garden, were revelling in it. I thought private gardeners might well take the hint. Often, of course, flower borders and beds cannot be entirely renewed, but if spare soil of any respectable nature, leaf-mould, burnt refuse, and road scrapings were added in liberal bulk, the effect on growth and bloom would soon be apparent, altering the character of the various occupants much more than the orthodox plan of merely digging or pointing in ordinary manure.—NORWICH.

Gillenia trifoliata.—When it can be left with safety from wind to develop its true habit, this plant is one of the most beautiful of our border or rock garden flowers. A good plant I saw the other day in Mrs. Maxwell-Witham's garden reminds me that one seldom sees any reference to it. Why this is so it seems hard to tell, because its beauty and grace would entitle it to frequent favourable notice. In some other gardens—notably in that of Mr. J. Lotimer, Nithbank, Dumfries, I have seen taller plants than that at Kirkconnel, but none pleased me better because of its neatness combined with elegance and pretty effect. Unhindered by stake or tie it was very beautiful with its flowers so thickly set upon its foliage. It was as if a swarm of small white butterflies had settled down upon it. Unfortunately, some of us cannot, because of wind, grow our plants in so natural and pleasing a way. *Gillenia trifoliata* is a North American plant, and is most at home in a moist but not too wet soil.—S. ARNOTT.

STOVE AND GREENHOUSE.

HELICONIA SANDERI.

This distinct and handsome fine-foliaged plant is one of several species which have been introduced within the last twenty years from "South Sea Islands" (wherever they are), and which have been called *Heliconias*, without having any evident relationship with that genus beyond belonging to the same natural order. True *Heliconias* are all natives of tropical America. Their leaves are not distichous (arranged fan-like), and they are quite different in texture from these South Sea islanders. Mr. Baker, who recently monographed the genus *Heliconia* and the several other members of Musaceæ, says these Asiatics probably belong to a new genus, but nothing can be done with them until the flowers are known. Cultivators who succeed in flowering any of them therefore will do useful botanical service by sending the

leaves, rendering it unique among plants of its kind. It was introduced by Mr. Bull in 1893. A variety named *rubricaulis* differs from the type in having the leaves more richly variegated and the bases of the leaf-stalks coloured vermilion. It was distributed by Messrs. F. Sander and Co. in 1895.

H. SANDERI (see figure) has the habit of *H. illustris*, differing only in being dwarfer, broader in the leaf-blade, and in being marbled with creamy white and rose on a glossy green ground. Messrs. Sander's collector describes it as a robust Musa-like plant, with the rich variegation of a tricolor *Pelargonium*. It received a first-class certificate at the recent Temple show.

These plants are all easily grown in a moist stove, and they pay for liberal treatment. The finest examples I have seen were grown by Mr. T. Rochford in his Broxbourne nurseries.

W. W.

Geraniums for winter flowering.—Now is the time to pay special attention to plants of



Heliconia Sanderi. From a photograph by Col. Taylor, Norbiton.

flowers to Kew. Meanwhile we must perforce continue to call them *Heliconias*. The species referred to are as follows:—

HELICONIA AUREO-STRIATA.—This was introduced in 1883 and was figured and described in Mr. Bull's catalogue of new plants for the year following as a noble-looking plant, resembling a dwarf Musa in general appearance. The leaf-stalks are striated with green and yellow, and the elongated blade is deep green with the veins marked out by lines of bright yellow. When grown in rich soil the leaves get large and become uniformly green, as may be seen by a large example in a corner of the Victoria Lily tank at Kew.

H. METALLICA was distributed by Mr. Bull in 1882. It closely resembles *H. spectabilis*, which may be only a form of it.

H. SPECTABILIS.—Introduced by M. Linden in 1891. This has large glossy green, ovate leaves, with a dull red midrib and coloured dull purple beneath.

H. ILLUSTRIS, well known to growers of stove plants, has beautifully variegated red and green

zonal *Geraniums* intended for winter flowering. Those struck in January or February will now have received their final potting. Pots 6 inches in diameter are those the majority of growers use, and when once the outsides of the balls are fairly well furnished with roots, judicious feeding must be commenced and followed up right through the flowering season. I do not think any compost surpasses good loam kept open by coarse sand or road grit. Avoiding crowding the plants, as a free circulation of air and sunshine are essential for the building up of a hardy constitution and thorough maturity. A dewing overhead with the syringe at eventide will be beneficial.—NORFOLK.

Clethra alnifolia as a market plant.—This *Clethra*, known as the White Alder of the United States, has been long grown as a hardy shrub in the open ground, and of late Messrs. Veitch have shown us what a pretty thing it is when brought on under glass, for they generally exhibit it in good condition at the Temple show. For all this, it was somewhat of a surprise to meet with it in Covent Garden Market, in the shape of bushes about 4 feet high, which were

plentifully sprinkled with their spikes of white blossoms. Having expanded under glass, the flowers were decidedly whiter than those in the open ground. As an outdoor shrub it is, in a cool, moist soil, decidedly attractive. This *Clethra* flowers, as a rule, during the month of August, but a variety—*tomentosa*—which appears to be rare I have seen at Kew in bloom after the others were all over.—H. P.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

JULY 25.

THE meeting on the above date was far better than anyone could have expected after the tropical heat we have lately had. The Orchids were not quite so numerous as on previous occasions, but in the other departments there was a good display, more especially in the fruit, the very fine collection of Gooseberries attracting a deal of attention.

Orchid Committee.

First-class certificates were awarded to the following:—

RENANTHERA IMSCHOOTIANA.—This lovely plant caused some sensation a few years ago when exhibited by Mr. Woodall, of Scarborough. On the present occasion a finer-developed spike was sent. The upper sepal and petals are each about an inch long, orange-yellow, suffused and spotted with purple. The lower sepals are rich purple, mottled and spotted with a dark shade of crimson, the lip deep purple in front, with a clear space of yellow at the base of the front lobe. The side lobes are purple, lined with yellow at the base. The cut spike carried upwards of twenty flowers. From Mr. J. Gurney Fowler, South Woodford.

SOPHRO CATTLEYA QUEEN EMPRESS (*Cattleya Mossiae* × *Sophranitis grandiflora*).—This is by far the finest of the *Sophranitis* hybrids. The sepals are deep purple at the top and around the margin, shading to light rose towards the base. The petals are similar, of nearly the same colour as the sepals, but veined with a darker shade of purple, the lip reddish purple in front, with some crimson through the centre, the side lobes margined with yellow, the remaining portion purple, shading to yellow at the base, where there is also a suffusion of brown. The plant carried a two-flowered raceme. Mr. Seden is to be congratulated on the production of so fine a hybrid after waiting a period of sixteen years. It is the only plant. From Messrs. J. Veitch and Sons, Chelsea.

DISA CLIO SUPERBA (*D. grandiflora* × *D. Veitchi*).—This differs from the typical hybrid in its having deep magenta segments. The lip is deep yellow, spotted with dark brown. The colour is most distinct and attractive, and the plant should prove a desirable addition to this fine race of hybrid *Disas*. From Messrs. J. Veitch and Sons.

An award of merit was adjudged to—

VANDA TERES (Gunnensbury Park variety).—This is a distinct and pretty form, the sepals white, the petals slightly tinted with rose-lilac. The front lobe of the lip has a distinct zone of rosy lilac in front of the bright lemon-yellow disc. The side lobes are rose-tinted on the exterior, yellow inside. A cut raceme of five flowers came from Mr. G. Reynolds, Gunnensbury Park, Acton.

Messrs. J. Veitch and Sons sent a small, but choice group consisting wholly of hybrids. The most prominent among these was a grand dark form of *Lælio-Cattleya callistoglossa ignescens*. The sepals and petals are of fine form and substance, pale rose-lilac, the front lobe of the lip rich velvety crimson, the front of the throat bright lemon-yellow, lined with purple in the centre, shading to purple lined with yellow at the base. The plant carried a three-flowered raceme. *Lælia Olivia* (*xanthina* × *crispa*), with its creamy

white, yellow, and purple flowers, was well represented. *Cattleya Atalanta* (*C. Leopoldi* × *C. Warscewiczii*) with two of its deep rose and rose-purple flowers was most attractive, showing the distinctive characteristics of its parents. *Epilælia Charlesworthi* (*L. cinnabarina* × *Epidendrum radicans*) with its orange-scarlet and yellow spotted purple flowers makes a fine addition to its class. *E.-L. radico-purpurata* with orange and purple-tinted sepals and petals, the large flat lip deep purple, shaded with orange, and a large bright yellow disc, is very quaint and interesting. *Epidendrum elegantulum* has creamy white sepals and petals, the lip white, lined and spotted with violet-purple. *Disa Clio* (*D. grandiflora* × *D. Veitchi*) has rose and lilac-purple flowers. *Disa Veitchi* was also well represented. *Cypripedium Morganæ*, with two spikes of three flowers each, was very effective. The true *C. Harrisianum superbum*, *C. Alice*, *C. Astræa*, *C. Euryale*, and a dark form of *C. Orphanum* were also included. A silver Flora medal was awarded. Messrs. Hugh Low and Co., Bush Hill, sent a small group consisting of a fine plant of *Cattleya Leopoldi* with twenty-six flowers on the spike. *C. Eldorado Wallisi* and a light form of *C. Eldorado* were also included. In *C. Prince of Wales* the sepals and petals are greenish white, the lip white, shading to yellow at the base, the whole surface veined and suffused with bright pink. *C. Dowiana* was also well represented. *Dendrobium sanguineum*, with its scarlet, white and yellow flowers, was most attractive. Messrs. F. Sander and Co. sent *Cypripedium Premier*, *C. Lord Derby*, *C. A. de Laresse*, *C. Garbari* and *C. callo-Rothschildianum*. Most of these were noted at the Chiswick meeting.

Mr. T. B. Haywood sent two spikes of eight flowers each of the almost white *Miltonia vexillaria* *Daisy* Haywood. A fine form of *M. v. radiata* and other forms came from the same collection. Mr. E. Ashworth sent *Dendrobium formosum* *Lowi*. In this the flowers were altogether larger than in the plant exhibited by Sir T. Lawrence, the lines on the lip being distinctly marked, showing the intermediate characteristics of the parent species indicated in the name. Sir T. Lawrence sent *Stanhopea aurantiaca*, with deep yellow and brown spotted flowers. Mr. F. A. Rehder sent *Cypripedium Miss Rehder*, having the intermediate characteristics of the two species from which it is derived. Lt.-Col. Shipway sent a good form of *Cattleya Warscewiczii* and a distinct *Gongora* with brown and white flowers.

Floral Committee.

A first-class certificate was awarded to

ABIES DOUGLASSI PUMILA.—This is the Colorado form of this plant, and certainly beautiful in the form seen at the Drill Hall. The pretty, almost pea-green tone of the plant, coupled with the compact bush form, should render it serviceable in any part of the garden. From Mr. Anthony Waterer, Woking, Surrey.

An award of merit was granted to each of the following:—

ACER CALIFORNICUM AUREUM.—Some discussion was raised as to the identity of this, but, apart from its title, the variety in question, if of the same hue permanently, is a very attractive plant, the foliage a pale golden yellow, with perhaps a suspicion of cream. From Hugh Low and Co., Enfield.

CAMPANULA MAYI.—This plant would have been more correctly labelled *C. isophylla* var. *Mayi*; indeed, for all practical purposes it is nearly a repetition of the typical *C. isophylla*. The chief difference is that *C. isophylla* is more distinctly hirsute than the seedling. In other respects, that of habit, freedom of flowering, colour, &c., the two are almost identical. Though the plants were trained erect, it is, of course, like *C. isophylla* in all its variations, a first-class trailing plant. The flowers are pale blue and salver shaped. From Mr. H. B. May, Edmonton.

BEGONIA M. WANNOT.—A double tuberous kind, having handsome flowers of immense size

of a delicate shell-pink shaded with salmon. From Messrs. R. Hartland and Son, Cork.

BEGONIA MR. JOHN CAULFIELD.—Another handsome sort with large flowers of an intense crimson scarlet hue. From Messrs. R. Hartland and Son, Cork.

CORNUS MACROPHYLLA.—A handsome shrub which occurs frequently throughout Japan and Northern India. It is of vigorous growth and bears an abundance of clusters of creamy blossoms. From Messrs. Veitch and Sons, Ltd., Chelsea.

ARUNDO DONAX MACROPHYLLA.—The chief differences between this and the ordinary forms of *A. donax* are its larger stature and decided glaucous colour of the leaves, that render it conspicuous at a distance. It is also called *A. d. glaucus*. From Mr. Anthony Waterer, Woking.

VITIS THUNBERGI.—In so far as size and general appearance go this appears a large form of the well-known *V. Coignetiae*, and quite distinct in garden effect. The leaves are finely coloured in autumn. From Mr. Anthony Waterer, Woking, Surrey.

DELPHINIUM JOSE MARIE DE HEREDIA.—A double—not a semi-double, as most so-called doubles are—with closely arranged flowers of light azure blue and rather deeper on the outer side. From Messrs. James Veitch and Sons, Ltd., Chelsea.

CAMPANULA WARLEYI.—A very distinct and pretty member of the Bellflower family, which attains nearly a foot high in the largest plants shown. The colour is deep violet-blue, the corollas of a semi-double character. The plant is rather free flowering, and slender and elegant in growth rather than vigorous, and though we trust it may prove a true perennial, the examples shown afford some uneasiness in this direction. From Miss Willmott, Warley Place, Essex.

CALADIUM MME. JEAN DABOWSKI.—A striking form with blood-crimson foliage, elegantly bordered with dark green, the leaves large and the plant generally showy. From Messrs. John Laing and Sons, Forest Hill.

ROSE J. B. M. CAMM.—A hybrid Bourbon of considerable promise. The ground colour is nearly white, the tips of the petals shading to rather deep rosy pink, which on the finely recurving petals is seen to advantage. The blossoms are delightfully fragrant. It is a seedling, raised between the H.P. Mme. Gabriel Luizet and the H.B. Mrs. Paul. From Messrs. Paul and Son, Old Nurseries, Cheshunt.

PHLOX FIANCÉE.—A pure white herbaceous kind, which, considering the intense heat and general dryness, was very good. From Messrs. Paul and Son, Old Nurseries, Cheshunt.

NICOTIANA SYLVESTRIS.—Visitors to the hybrid conference at Chiswick had a good opportunity of noting this plant, a cut spike of which was now shown. The flowers are white, and droop in the daytime while not closing. From Mr. J. Hudson, gardener to Mr. Leopold de Rothschild, Gunnersbury.

From Edmonton Messrs. J. Hill and Son brought a really grand lot of Ferns, many of which were of great size. Some of the more important things were *Leucostegia immersa*, *Cyathea insignis*, *Davallia fijiensis elegans*, a splendid example; *Nephrolepis davallioides furcans*, *Adiantum elegantissimum*, *A. trapeziforme*, both in capital form; *Pteris aspericaulis*, with red-coloured fronds; *P. tremula Smithiana*, very fine; *Davallia tenuifolia Veitchi* and *D. epiphylla*, fully 6 feet across. *Dicksonia davallioides* and several *Gymnogrammas* were also shown, the group occupying a considerable space. A silver-gilt Flora medal was awarded. Another highly meritorious group was that of Ivies from Messrs. Wm. Cutbush and Sons, Highgate. These were presented in excellent condition, the plants nicely arranged in baskets, one such being devoted to each kind, which materially assisted the view and equally the group. In all there were some four dozen examples or thereabouts representing very naturally the finest material of this valuable

group. A few kinds are *dentata*, *maderiensis*, *argentea variegata*, *rhomboidea obovata*, *palmata aurea*, &c. A silver-gilt Flora medal was deservedly awarded in this instance. A capital lot of hardy flowers and the hybrid *Rhododendrons* of *jasmiflorum* and *javanicum* were shown by Messrs. Veitch and Sons, Ltd., Chelsea. In the former, *Verbena venosa*, *Platycodon grandiflorum album* and *P. Mariesi*, *Gaura Lindheimeri*, the latter a fine subject for a dry soil; *Romneya Coulteri*, a fine solitary flower of this; (*Eriogonum speciosum*, *Scabiosa caucasica*, *Liatris*, *Eryngium* in variety, *Statice latifolia*, very beautiful; *Cimicifuga racemosa*, with fine spikes of white and creamy white flowers; *Delphinium sulphureum*, a splendid spike of this fine plant; *Harpalum rigidum*, the early form; *Sidalcea candida*, *Moranda didyma*, and others were included, the group being finished off with sprays of *Gypsophila paniculata*. The *Rhododendron* hybrids were a complete set of these so far as then in flower, nothing new or fresh being noted. A silver Flora medal was awarded. A beautiful and interesting gathering of hardy things from Messrs. Wallace and Co., Colchester, contained a variety of Lilies, including *L. Henryi*, *L. Browni*, *L. pardalinum*, many beautiful forms of *L. Thunbergianum*, the brilliant scarlet *L. chalcodonicum*, much finer than is usually seen, and not least a finely-marked *L. auratum* (*vittatum* variety). Indeed, with the *L. auratum* foliage and growth generally we have a decidedly *L. platyphyllum* flower in many respects, particularly size and breadth of the segments, and with all this we have a flower much richer and more intensely coloured even than *L. rubro-vittatum*. At present no distinctive name has been given to this fine Lily, which promises to be an acquisition. Other good things in Messrs. Wallace's group included *Montbretias*, *Alstroemerias*, *Calochorti*, *Liatris spicata*, *Delphinium cardinale*, *Echinops Ritro*, some lovely Japan Irises, and a few good sorts of garden Carnations (silver Flora medal). The group of Cacti and allied plants from Messrs. Cannell and Sons, Swanley, was among the chief attractions of this meeting. Many of the examples were very rare, others almost unique, and all interesting. A very fine piece of the Golden Cactus (*Echinocactus Grusoni*), with its long gold spines, was in the centre, the not less beautiful *E. cylindricus versicolor*, with reddish spines 4 inches long, being a close companion. Other good things are *E. c. chrysanthus* and the sturdy *E. ingens*. There were also some notable examples of *Cereus*, *Echinocereus*, *Opuntias*, *Pilocereus*, *P. senilis* (the Old Man Cactus) being noticeable in several fine plants. There were also good contributions of *Echinopsis*, *Mammillarias*, and others of this very remarkable group, the whole of which formed an exhibit quite unique in character and material. A silver Flora medal was awarded. From Langport, Messrs. Kelway and Sons sent a large display of *Gladioli*, cut spikes of these being arranged in boxes. As yet it is early for these things, and the kinds staged do not in any sense represent the good things we have seen from this firm. Some seedlings of *G. Kelwayi*, said to be a new race, were also shown, but no information could be obtained as to their origin, though some of them appeared to possess certain characters of the *G. Lemoinei* forms. One of the best of these is *Mr. J. W. Willard*, a large salmon-pink with crimson base. *Max Muller*, *Kipling*, *Lord Ashbourne*, and *Brutus* are good scarlet kinds. *Dr. Woodman*, *Plunket*, salmon shades, and *King of Siam*, a rich crimson-maroon, were also noteworthy. The same firm also had *Gaillardias*, *Hollyhocks*, and a selection of herbaceous things, as *Eryngium*, *Achilleas*, *Lychnis*, the pretty *Delphinium Belladonna*, and such like (silver Flora medal). Roses came from three sources, viz., Messrs. Paul and Son, Cheshunt; Cooling and Sons, Bath; and *Mr. W. Rumsey*, Waltham Cross. In the first named, mixed with many beautiful Roses, such as *Maman Cochet* and its white form, *Muriel Grahame*, *Ellen Keller*, *Mrs. Grant*, and *Gustave Regis*, were some good heads of *Phloxes*,

such things as *Etna*, *Regulus*, *Coquelicot* being conspicuous among the bright coloured kinds. *Iris*, a purple-mauve, was also noted as distinct from the general collection (silver Banksian medal). In Messrs. Cooling's lot, which was arranged in vases in bunches, *Gustave Regis* and *Papa Gontier* were very fine, while more conspicuous even than these were *Duchesse d'Auerstadt*, a clear rich golden, and *Mlle. B. Violette*, a yellow and white kind. *Paul's Single White* and *Macartney Simplex* were also good among single kinds (silver Banksian medal). In *Mr. Rumsey's* lot the most telling thing was a box of the pink *Mrs. Rumsey*, the other boxes containing single blooms of a great variety of kinds (silver Banksian medal). A very fine array of cut *Begonia* blooms from Messrs. Richard Hartland and Son, Cork, represented a fine strain of these flowers. Some of the doubles were particularly fine and were selected for awards, the remainder all affording evidence of the highest excellence. The batch was very strong in the pale salmon shades. Flowers of seedling single kinds were also shown, and though by no means the best things to stand so long a journey, came out quite fresh and good, and stood well during the day (silver Banksian medal). The group of *Campanulas* and *Ferns* from *Mr. H. B. May*, Edmonton, was a very attractive one, the former being of the blue and white kinds of *C. isophylla*. The blue kind called *C. Mayi* is obviously a seedling from *C. isophylla alba*, and for all practical purposes a reversion to the typical species. This last, however, is, perhaps, rather more hirsute than the seedling, which is in every respect a free-growing and abundantly flowered plant. It is a coincidence that *Mr. E. H. Jenkins*, Hampton Hill, exhibited a seedling *Campanula* at the recent Chiswick conference which appears identical with the present plant (silver Banksian medal). Messrs. Hugh Low and Co., Enfield, showed a small group of *Acer californicum aureum*, and *Mr. A. Waterer*, Woking, had a variety of interesting trees and climbers, among these *Fagus sylvatica purpurea pendula*, very fine and distinct, *Quercus pedicularis*, *Clethra canescens*, and a fine golden form of *Ulmus campestris* named *Louis van Houtte*. *Kolreuteria paniculata* is a pretty yellow-flowered plant. *Vitis Coignetiae* and *V. Thunbergi* were also shown in capital form. *Mr. R. C. Notcutt*, Woodbridge, Ipswich, had an assortment of Sweet Peas. Messrs. Sander brought good examples of *Acalypha hispida*, and the pretty *Palm*, *Linospadix Petrickiana*. Messrs. Dobbie and Co. had a group of *Victoria Pansies*, a strain of bronzy-red flowers. As usual, the Messrs. Barr and Sons had an exhibit of hardy flowers, for the most part the usual subjects that are now in flower, as *Coreopsis*, *Heliopsis*, *Anchusa italica*, the white and mauve *Scabiosa caucasica*, *Phloxes* of the decussata section, beautiful Japanese Irises, *Platycodon Mariesi*, *Francoa*, *Alstroemeria psittacina*, *Lilium*, and one or two forms of *Campanula carpatia*, &c. *Mr. Salter*, gardener to *Mr. T. B. Haywood*, Reigate, showed handsome bunches of Carnations *Isinglass* and *Germania*, neither of which can be equalled in their respective shades of colour, the flowers being very finely grown. A most attractive group arranged on the floor was that from *Sir Charles Pigott*, Wexham Park, Slough (gardener, *Mr. J. Flemming*). The chief attraction of the group was some finely-grown *Humeas*, drooping their willowy plumes over some well-grown examples of the blue and white *Chimney Campanula*, the general effect being very distinct and pleasing. The groundwork was composed of the usual plants, *Crotons*, *Carnations*, *Cannas*, *Caladiums*, *Liliums*, *Francoa* and such like being disposed to good advantage from several central or important positions, everything, however, being subordinate to the *Humeas* and the *Bell* flower above-named, and which lent a distinct charm to the whole. More than this, it fully demonstrated the value of tall, graceful and elegant things in the decoration of the conservatory, or indeed any large building, and for such a purpose the plants cited are perhaps difficult to equal.

Fruit Committee.

A meeting was held in the society's gardens on July 24 to examine dwarf Beans, early Potatoes, and Tomatoes on trial. Unfortunately, the committee was one member short, so could only recommend awards, but as these were sanctioned by the larger committee at the Drill Hall the next day, the awards appear in that day's proceedings. Some thirty stocks of early Potatoes were lifted and ten selected for cooking. The crops were excellent for the season, many having been cut down by frost early in May and again in June. Three marks were given *Early Peter*, *Caradoc Seedling*, *Norbury Park*, *Prolific*, and *Hibberd's Seedling*. The others did not pass the cooking test. *St. Lawrence*, *Early Market*, and *Leader* were good in other respects. It is only fair to add some kinds were not sufficiently matured. Dwarf French Beans formed a most exhaustive trial, nearly all the kinds in commerce being grown. The seed was sown on a south border on May 5. About fifty-seven stocks were represented. Some half-dozen kinds were selected as superior, three marks being given. Turnips were examined, but owing to heat and drought were past their best. Tomatoes in pots were next gone through. There was but little novelty, as, though some excellent kinds were on trial, any new variety must be good to be recognised. *Comet*, an old kind, was given three marks for its excellent cropping, and a very pretty variety, *Cherry Ripe*, was given the same award. A new Tomato, a sport from the *Red Peach*, and by selection improved, has handsome fruits of a pale peach colour and of excellent quality. This the committee recommended for a first-class certificate.

This committee had its full share of work at the Drill Hall on Tuesday, there being some excellent exhibits.

First-class certificates were given the following:—

GRAPE LADY HASTINGS.—A sport from *Muscat Hamburg*, but a much stronger variety, having robust, glossy foliage, a roundish large berry with thin skin and of splendid colour. It is very juicy, with a distinct Muscat flavour. This is a valuable addition to the Black Muscat Grapes. From *Mr. W. Shingles*, The Gardens, Melton Constable, Norfolk.

STRAWBERRY LADY SUFFIELD.—A new variety that has been shown on several occasions of late. It is a dark fruit not unlike *Lord Suffield* in colour, with prominent seeds and of excellent flavour. It is a free cropper and evidently a good keeper, as the fruits sent were of fine quality. From *Mr. Wm. Allan*, Gunton Park Gardens, Norwich.

CHERRY NOBLE.—A very fine late fruit, dark red, not unlike a very fine *Morello* in appearance, but a dessert variety. It is very fleshy, sweet and a great bearer. This will be a welcome addition to the late kinds. From Messrs. Ray and Co., Nurserymen, Teynham, Kent.

Awards of merit were given to the following:—

POTATO EARLY PETER.—A kidney-shaped tuber of fine flavour with a short top, very productive. From *Mr. Bradley*, Church Street, Peterborough.

POTATO CARADOC SEEDLING.—A pebble-shaped tuber of fine quality. It is an early variety and very prolific. From *Mr. Caddick*, Caradoc Court, Ross, Herefordshire.

POTATO NORBURY PARK.—This is a distinct early kidney with a dwarf top and of excellent quality. From *Mr. L. Solomon*, Norbury Park, Dorking.

POTATO PROLIFIC.—A very prolific early variety with a rough skin and of first-class quality. From Messrs. Johnson and Sons, Boston, Lincoln.

POTATO HIBBERD'S SEEDLING.—A yellow-fleshed kidney of excellent quality with small top. From *Mr. H. Hibberd*, Edge End, Botley, Hants.

FRENCH BEAN PROGRESS.—An enormous cropper with large fleshy pods of fine shape. It is very early and stands drought well. From Messrs. Veitch and Sons, Ltd., Chelsea.

FRENCH BEAN EVER-BEARING.—This is a distinct Bean with large leafage, the flowers being produced in long racemes above the leaves. The plants continue bearing for a long time. The pods are of a good size and fleshy. The only drawback with this class of Bean is that the plants in wet seasons, owing to the produce being on the top, are liable to be beaten down and get dirty. MM. Vilmorin et Cie., Paris.

FRENCH BEAN STRINGLESS.—In this the pods are devoid of the string portion at the backs. This is a great gain, as much time is saved in preparation. The pods are round, very fleshy, of good quality, and produced freely. The plant is a free grower, and the pods are best if cooked whole.

FRENCH BEAN NE PLUS ULTRA.—This is a well-known variety and very delicate in flavour. It is an excellent cropper and very early. From Messrs. Veitch, Ltd., Chelsea.

FRENCH BEAN PERFECTION.—This has long succulent, narrow pods of a roundish form, very fleshy, of excellent quality, and produced in abundance. From Messrs. Sutton and Sons, Reading.

FRENCH BEAN COVENT GARDEN EARLY NEGRO.—This is a long-podded variety, and though not a very early kind it is remarkable for its cropping. The pods are long and narrow. From Messrs. Watkins and Simpson, Strand, W.C.

TOMATO CHERRY RIPE.—A Plum-shaped fruit, produced on large long clusters, and excellent for salad. It was one of the best flavoured Tomatoes grown at Chiswick out of many kinds. It is very prolific, the fruits of a deep crimson colour. From Messrs. Dobbie and Co., Rothesay, N.B.

TOMATO THE COMET.—An old variety, still one of the best on trial for crop, quality, and shape. The fruits are produced in great profusion and are medium-sized. The Royal Horticultural Society, Chiswick.

Messrs. Veitch, Ltd., sent one hundred varieties of Gooseberries in trays and a goodly number of trees in pots, also in cordon shape, fan-trained and vase or cup-trained. The trees were laden with fruit and the leafage perfect. Mention must be made of such as Langley Beauty and Langley Gage, new kinds of great merit. Industry, Forester, Keepsake, High Sheriff, Clayton, Tom Jones, Jenny Lind, Lancashire Lad and Oldham were also good. In the white section, Alma, Antagonist, King of Tramps and Progress were beautiful fruits. In the greens, such kinds as Fearless, Keepsake, Matchless, Plunder and Surprise were excellent, and in the red section, which was strongly represented, we noted Clayton, Crown Bob, Dan's Mistake, Duke of Sutherland, Highlander, Nottingham and Whinham's Industry, with excellent yellow kinds, such as Drill, Hannah, Lavelle, Penn, Pilot and Trumpeter. Bright Venus, Early Red, Ironmonger, Keen's Seedling, Warrington, Champagne and Yellow Sulphur were noteworthy for flavour. A gold medal was deservedly awarded. From Mr. G. Norman, Hatfield House Gardens, Herts, was sent a choice collection of dessert fruit, including Royal George Peaches, Lord Napier Nectarines and Brown Turkey Figs. Grapes in three varieties were the weakest dishes. Cherries were fine, the Bigarreau Napoleon, Frogmore Bigarreau, Black Tartarian and May Duke being splendid. British Queen and Waterloo Strawberries were also good. Raspberries Superlative and Norwich Wonder, with White and Red Currants, were also shown (silver-gilt Knightian medal). Messrs. Harrison and Sons, Leicester, sent eighty varieties of Peas. A few of the older kinds were not true to name. The dishes of Duchess, Gladstone, Telephone, Duke of Rutland, Geo. Clelland, Sharpe's Queen, Stratagem, Optimus, John Harrison, Gradus, Leicester Hero, Emperor of Japan, and several new hybrids were of excellent size and colour (silver Knightian medal). A new Grape stated to be a white early Muscat came from Andover. The committee thought it to be a Frontignan variety. A new Raspberry (Eclipse) came from Mr. Jennings, Barrow-on-Humber, but of no special merit. The same exhibitor sent a new Pea

called Competitor, which was referred to Caiswick for trial. Messrs. Veitch sent the Loganberry, also fruit in a preserved state. Mr. G. Wythes, Syon House, Brentford, sent seedling Melons.

SPECIAL MEETING, JULY 21.

A special meeting was held at 117, Victoria Street on July 21 to consider the proposed alterations in the society's charter. Most of the members of the council attended and about twenty Fellows, Sir Trevor Lawrence, Bt., presiding. The president stated that the council had in the past found some portion of the old charter most difficult to work, and it was feared some of their actions in the past were not quite legal, and though they had all tried to do the right thing, they had taken legal advice and were now endeavouring to make clearer and more workable rules. Much of the confusion in the past arose at the time the society had to vacate South Kensington. This made a lot of the existing charter obsolete, and they were advised it would be far better to get a new charter and add more to the bye-laws than patch up the old one. The council trusted the Fellows would see the need of the proposed alterations. The president, in calling upon the solicitor to read the new charter, said he would be glad to explain any points and reply to questions that arose. Mr. Clark, from the office of Messrs. Garraud, James, and Wolff, solicitors, Pall Mall, then read the new charter. This showed considerable alterations in election of members of the council, and we think even now the process might have been much simplified; but without the new charter to refer to it is difficult to criticise. It is proposed that one-fifth of the number retire yearly, but till and including 1903 the present system is to be followed; afterwards it will be eligible for members to be re-elected. There is still the same cumbrous mode of procedure about notices to nominate a new member from outside. Dr. Masters asked if the new charter would cause a total re-construction of bye laws, and was informed it would. Mr. G. Gordon regretted the smallness of the meeting, and made some suggestions as to election of council and its members. In reply, the president said in the past the difficulty had been to get gentlemen to give their time. Sir J. Llewelyn, Bart., seconded the adoption of the new charter.

National Carnation Society.—The report of this show will appear in our next issue.

NOTES OF THE WEEK.

Pratia angulata.—This is now freely covered with its pretty white flowers, to be later succeeded by equally attractive fruits. In a moist position in peaty soil the plant covers a large space quickly, and is also serviceable in large hanging pans in the greenhouse or cool fernery.

Nymphaea Froebeli.—Others have begun to take part in the good work done by M. Latour-Marliac, among them M. Froebel, of Zurich, whose N. Froebeli is a vigorous and hardy kind. After a trial of two seasons in open water it is now large and free in flower compared with the other highly-coloured kinds, and is a fine deep crimson.

Mazus Pumilio.—This pretty plant, with its Snapdragon-like flowers, is one of the freest of subjects for covering the surface of the ground in any cool or rather shady place. The plant must have one of these if it is to grow at all freely, for it dislikes dry and hot positions. For so dwarf a plant it is quite a vigorous subject and of considerable value by reason of its hardy character.

Delphinium sulphureum.—Some fine sprays of this plant were shown at the Drill Hall meeting on Tuesday last. The term "sprays" is here employed because of the spray-like character of the inflorescence, as a whole as distinct from the usual spike-like raceme of so many Larkspurs. In a group the free-branched character of this plant is very fine, and for this as much as its distinct colour this yellow Larkspur merits wide cultivation.

Geranium cinereum album.—This is one of those charming plants that everyone must admire at

first sight. Not merely for its delicate beauty and grace, but as much for its profuse flowering is it worth the attention of all who delight in dwarf and pretty rock plants. Indeed, it is these very plants which, while not furnishing material for cutting, provide at the present time the most beautiful of material in the rock garden or in the open garden, anywhere if you will.

Oenothera tetraptera rosea.—A very pretty and dainty coloured flower of the Evening Primrose family, a term, however, that in this plant appears a misnomer, particularly so as the blossoms remain fully expanded throughout the day. It is, perhaps, of biennial rather than of perennial duration, though it may survive certain mild winters or even moderately severe ones in somewhat favoured places. Should it prove perennial it will make a most welcome addition to its race.

The Royal Fern (Osmunda regalis).—While fishing on a small loch in the neighbourhood of Arisaig, Inverness-shire, I was surprised to see this beautiful Fern growing in such quantities. The plants were numerous and large, the crowns in many instances very prominent. There are two small islands where this occurs, and they are on the North Morar estate and not more than two miles from Loch Morar itself. On the shores of this beautiful loch I have failed to find Osmunda regalis. Can this be the natural home of this Fern, or has it at some time been planted?—BLUE HACKLE.

Prunella grandiflora alba.—The white variety of the well-known *Prunella grandiflora* is a pretty plant, which is only met with occasionally in collections of hardy flowers. The white in the best forms is almost pure. It comes fairly true from seed, and from a batch of seedlings it is easy to select the best forms from which to propagate. Like most other flowers, a continuance of raising seedlings and choosing the best would probably lead to an improvement in the flower.—S. ARNOTT.

Synthryis reniformis.—I have to thank Mr. Carl Parry for having been at the trouble to note so carefully the colour of *Synthryis reniformis* as grown at Ukiah, in California. If the white *Synthryis* retains its colour when it is introduced into this country it will be very welcome in our gardens. One always finds white varieties of good flowers much admired. It is not difficult to imagine how pretty would be a good plant of *S. reniformis albus*, and how much such would be coveted by alpine growers.—S. ARNOTT.

Prunella Webbiana.—In the welcome "Notes from a Cornish Garden" on p. 52, "C. R." speaks of the pleasing contrast afforded by *Prunella grandiflora* with *Lonicera tristis*. This leads one to draw the notice of flower growers to the variety of *P. grandiflora* named *P. g. Webbiana*, but frequently called, as I have done in the heading, *P. Webbiana*. The colouring is much brighter than in the typical *P. grandiflora*, being more scarlet than purple. I grow both here, so can speak of them from comparison on the spot.—S. ARNOTT.

Iris tingitana.—Like the other correspondents who have written you, I fear I must express my disappointment with this Iris. Although my experience of it is not nearly so extensive as that of Rev. C. Wolley-Dod, I have had it for several years and have not bloomed it more than once. It grows freely enough and does not appear to mind late frosts or the other enemies to which many flowers are subject. Rev. C. W. Dod's suggestive note may, however, lead to fresh attempts to find out its requirements in our climate.—S. ARNOTT, *Cursethorn, by Dumfries, N.B.*

Carnation Isinglass.—It will be a splendid Carnation that will surpass this lovely crimson-scarlet, if this is the true description of its colour. Perhaps a better colour definition would be deep rich scarlet, though even this conveys no idea of the intensity of the almost velvet hue that predominates the flower. Not only in colour, but equally in the firmness of the petals is it a grand Carnation. It was in good condition at Chelsea the other week, and the other day Mr. Salter brought to the Drill Hall, from Mr. Haywood's garden at Reigate, a lovely gathering of the same

thing. As a scarlet self it will long remain a variety of high excellence.

Campanula Warleyi.—The pretty Campanula bearing this name that secured an award of merit from the floral committee on Tuesday is quite an addition even to this extensive race of blue-flowered plants. In the group as shown the plant gave a pretty picture, though individually the plants do not appear to be endowed with much vigour or even freedom of flowering. A feature of the new-comer is the semi-double corolla, while the foliage gives one the impression here and there of *C. rhomboidalis*. Adverting to the mode of growth from the base, it reminds one of the rather frail and delicate *C. Ledeburiana*. This is so in the apparent outspreading character, and equally so in the sparsity of the growth. In these particulars the two plants have much in common, but the flowers are very distinct.

Fritillaria pluriflora.—The valued "Californian Notes," by Mr. Carl Purdy, with the reference to this Fritillary on page 49, lead me to remark how hardy it appears to be and how well it withstands cold weather. Last autumn some bulbs were planted in a rather cold, exposed position facing N.E., and thus exposed to cold winds. The plants were nearly a foot high when the spell of exceptionally severe weather we had in March came. For more than a week the plants were fully exposed to the cold winds, and were so limp from the effects of the frost that they were literally prostrated by it. On the return of milder weather they recovered and seemed none the worse of the ordeal through which they had passed. Perhaps the absence of sun helped them to withstand the frost better than they would otherwise have done.—S. A.

Lilium chalcedonicum.—Few things are finer now in the garden than the rich flowers of the scarlet Turk's-cap Lily. Get sound, healthy bulbs, and, if possible, plant them quite by the end of August, or, if need be, transplant them also about this time, and in a position free, or nearly so, from mid-day sun. A rather stiff, holding soil is much better for this Lily than is the orthodox light, sandy loam so freely recommended for growing many things in. Too often plants suffer badly from soils deficient in body as it were, and the addition of quantities of humus is but a move in a wrong direction. Many Lilies are more vigorous in strong loam than in peat, and of these I am not now referring to those of a swamp-loving character. A sound loam well filtered by sharp grit will grow many things well, and not a few good alpine may be included in this number.

Ixia viridiflora.—In his notes on "Bulbous Plants at the Temple Show," "S. W. F." (p. 38) speaks in appreciative terms of *Ixia viridiflora*. It is pleasant to find that one's impressions of this flower are the same as those of your correspondent. *I. viridiflora* was the most charming of the many beautiful Ixias shown. Most people cannot realise that there can be much beauty in a green flower, but the exquisite sea-green of this *Ixia* would go far to bring them round to another opinion even if it had not the black-purple throat which is so markedly effective. The hardness of the *Ixia* is only comparative, and I should like to know if *I. viridiflora* is not more difficult to protect in winter. Messrs. Wallace's flowers were exquisite in their colouring, but one would presume they had been grown under glass. The green-flowered *Ixia* is not often seen even in glass structures, and it ought not to be so little grown.—S. ARNOTT.

Mr. J. Wood's Scarlet Pea.—This perennial Pea is one of the best and most effective of a valuable genus for garden decoration. The colour is the brightest of any of the varieties of *L. latifolius*, and a large, well-established specimen is very beautiful. The colour is pretty well described by the name of Scarlet Pea. I do not know whether it originated at Kirkstall or not, but if not raised there it was, at least, sent out from Mr. John Wood's garden. Although occasionally seen, it is not often met with in gardens,

and one can only say that it ought to be more largely grown. It is not difficult to find a place in most gardens where a Pea such as this could be made use of with benefit. A light wooden trellis is cheaply and easily made, or can be procured at a low price in lengths. This Scarlet Pea clambering over a trellis is very pretty in its season of bloom. Other ways of growing it will readily occur.—S. A.

Lilium testaceum.—It is with pleasure that an old admirer of this fine Lily sees an appreciative note by "T." in THE GARDEN of July 22. It is one of the most satisfactory of our garden Lilies. Its beauty is enough to make it deserve room, and the ease with which it can be grown entitles it to the notice of those who have a difficulty in growing many other Lilies. On very dry soil, although a little dwarfed, it flowers freely enough, but is all the better for an occasional soaking with water before coming into bloom. As "T." says, the young foliage is seldom injured by frosts or cutting winds. It was in this garden when I came here about fifteen years ago, and has never failed to flower annually. The colour is very pleasing also, and is fairly well indicated by the application to it in some continental nurseries of the name of *L. isabellinum* from its shade of yellow.—S. ARNOTT, *Cursethorpe, by Dunsfries, N.B.*

Campanula Waldsteiniana.—Among the many beautiful and rare alpine plants, this one is all too rarely seen in good condition. In Mr. Whitehead's garden at Wimbledon the plant is evidently at home. It is perhaps not sufficiently recognised that there are several varieties of this plant, and particularly of the dwarf form. In what I believe is the true plant the lobes divisions of the corolla are almost ovate, and usually this form has a coloured exterior about the ovary. In one or two other forms I have seen the corolla divisions are more pointed, indeed all but acutely pointed, the flowers larger and more generally spreading. Yet in all these there are the same dwarf, compact growth and habit generally, save that in the true plant there is an inclination to a more glaucous tone in the radical leaves. Quite recently I have noted at least two varying forms of this exquisite little plant. In its best form it is nearly 6 inches high, and from June onwards to the middle or end of July it is studded with its pretty blue flowers.

Oenothera Youngi fl.-pl.—Without seeing Mr. Michael Cuthbertson's double (*Oenothera*, mentioned in THE GARDEN of July 22 (p. 71), one cannot tell wherein it differs from the above variety of *O. Youngi*, which is in itself a form of *O. fruticosa*. The double variety of Young's Evening Primrose is not a common plant and may more correctly be called semi-double than double. The cup of the flower is partly filled with smaller petals. The leaves are not purple, but are tinged with that colour, as are portions of the stems. This variety of *O. Youngi* is not very plentiful, but is offered in a few catalogues. When well grown the "doubling" is better than when on very light soil. In the garden it is not so effective as the single form.—S. ARNOTT.

P.S.—Since writing the above I have, through the kindness of the editor, had an opportunity of seeing Mr. Cuthbertson's new variety. The flowers resemble those of *O. Youngi fl.-pl.*, but the deep colouring of the stems, leaves, and buds adds greatly to its beauty. The contrast between this and the bright yellow flowers ought to make it valued. It looks to me as if it were a seedling from the variety of *O. fruticosa* named *Fraseri*.

The weather in West Herts.—The present spell of warm weather has now lasted over three weeks. The hottest days of the period were the 19th, 20th and 21st, when the temperature in shade rose respectively to 81°, 85° (the highest reading as yet registered this summer) and 83°. During the night preceding the 22nd the thermometer exposed on the lawn never fell lower than 58°, making this the warmest night experienced here in July for six years. The temperature of

the ground at 2 feet deep is now 4° higher, and at 1 foot deep 5° degrees higher, than is seasonable. The heavy rainfall of the 22nd and 23rd did not appear to either raise or decrease the temperature of the soil to any appreciable extent. At nine p.m. on the 21st the temperature at 1 foot deep stood at 74°, which, with the exception of June 19, 1893, is the highest reading at that depth as yet recorded here. Rain fell during the night of the 22nd to the depth of nearly an inch, and on the following day to the depth of rather more than a quarter of an inch. To give some idea of the welcome heaviness of these two falls when combined it may be stated that it was equivalent to a watering on each square yard of surface of nearly six gallons of water.—E. M., *Berkhamsted*.

TEACHING HORTICULTURE IN INDUSTRIAL SCHOOLS.

At the present time trained or fairly skilled labourers are very scarce, and market gardeners are greatly handicapped accordingly. To meet this want, and at the same time be doing good service to certain classes of the community, it has been suggested that horticulture be taught at industrial schools, and there is no doubt, I think, about this being a step in the right direction. As far as my experience goes, the idea has only been mooted in horticultural papers, and not put into actual practice other than at ordinary elementary schools, more especially in Surrey and at one industrial school. The managers of the Kingswood Reformatory, near Bristol, have anticipated some of their contemporaries around London by having decided several years ago to utilise their superabundant labour, and at the same time train a certain number of the more promising boys to become working gardeners. Twelve acres or more of poor land have been gradually brought into a fertile, productive state, fruit trees and bushes planted, and a good step made towards forming a fairly remunerative farm. The men who superintend the work are experienced gardeners, and in addition a series of lectures and demonstrations have recently been held under the auspices of the agricultural section of the Gloucestershire County Council. If this comparatively new departure is persevered with, there is every likelihood of a number of strong, active, well-disciplined youths being available either for employment in market gardens in this country or in the colonies. The Kingswood Reformatory is largely supported by voluntary subscriptions, and the philanthropists who take such an active interest in this admirably conducted institution are to be congratulated upon the good work they are doing. There are far too many young reprobates on our streets, and those who succeed in converting even a small portion of them into respectable working men, good soldiers and sailors, deserve our best thanks. SOMERSET VISITOR.

Recreation ground for Finchley.—The Ecclesiastical Commissioners, in view of the large interests they hold in the parish, have agreed to lend the Finchley District Council £5000 at the exceptionally low rate of 2 per cent. interest, for the acquisition of land for a recreation ground.

Names of plants.—*J. A.*—1, *Campanula latifolia pallida*; 2, *C. alliarifolia*; 3, *C. Hosti alba*, probably; 4, *C. grandis*; 5, *C. carpatia* var.; 6, send again, too far gone. Please send only four specimens in any one week. Others shortly.—*S. H. Boyle*.—1, *Periploca graeca*; 2, *Ailanthus glandulosa*; 3, Black Walnut (*Juglans nigra*).—*G. C.*—1, *Genista aetnensis*; 2, we cannot undertake to name Roses.

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THE GARDEN.

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INDEX.

(Illustrations in *Italics*.)

Orchids:—		Roses, exquisite tints of some recent novelties in .. . 96	Week's Work:—		Lily, double-flowered Mar-tagon .. . 107	Pansy, Tufted, Mrs. A. H. Beadles .. . 110
Cattleya Schofieldiana .. . 94		Roses on pillars and arches 96	Fruits under glass, work among .. . 103	Eleocharis Fraseri .. . 107	Pansies, Tufted, for stock .. 110	Pea, Mr. J. Wood's Scarlet .. 110
Cypripedium Sedeni candidulum .. . 93			Kitchen garden, work in the .. 103	Plants, notes on hardy .. . 109	Peas, Sweet, failing .. . 110	Peas, Sweet, for table deco-ration .. . 111
Cypripedium superbiens .. . 93	Orchard and Fruit:—	Apple Mr. Gladstone .. . 102	Kitchen:—	Pratia angulata .. . 107	Romneya Coulteri .. . 110	Saxifraga mutata .. . 111
Dendrobium Dearei .. . 94	Fruit, rottenness in, and mummification in Peaches .. 99	Fruit trees, spraying .. . 100	Artichokes, Globe .. . 105	Rodgersia podophylla .. . 108	Scabiosa caucasica alba .. . 110	Zauschneria californica .. . 111
Dendrobium, notes on .. . 94	Gooseberry Rough Yellow .. 102	Fruit trees, worn-out .. . 101	Celery, trouble with the .. 105	Rodgersia podophylla .. . 108		
Epidendrum vitellinum .. . 95	Peaches and Nectarines in the south and north .. . 95		Kitchen garden, room in the .. 105	Sweet Sultan, the yellow .. 109		
Laelia crispata .. . 94	Peaches and Nectarines, stone-splitting in .. . 102		Pea swards at Chiswick .. . 105	Tropeolum speciosum .. . 107		
Laelia Jongheana .. . 93	Peaches in Russia .. . 100		Potato crop, the early .. . 104	Water Lilies at Wisley .. . 108		
Masdevallia muscosa .. . 93	Pears adopted by the Congrès Pomologique of France .. 101		Spinach, autumn and winter .. 105	Yucca gloriosa .. . 102		
Odontoglossum Halli xanthoglossum .. . 94	Raspberries, profitable .. . 93		Vegetables and drought .. 104			
Orchids, wild .. . 95	Strawberry Empress of India .. 99			Societies:—	Public Gardens:—	
Renanthera Storieri .. . 94	Strawberry plants, young, potting .. . 98			Carnation and Picotee .. . 109	Hampstead Green for the public .. . 112	
Stanhopea tigrina .. . 94	Strawberry season, the .. . 97					
Trichopilia lepidota .. . 93	Strawberry V. H. de Thury .. 98			Notes of the Week:—	Obituary:—	
Vanda Sanderiana .. . 95	Strawberry Waterloo .. . 98			Annuals, hardy, in S.W. of Scotland .. . 111	Parker, Mrs. Richard .. . 112	
	Strawberries, flavour in .. . 99			Campanula Maritima alba .. 110		
Park and Woodland:—	Strawberries in the open ground .. . 98			Campanula mirabilis .. . 111	Miscellaneous:—	
Pine, the Corsican .. . 95	Strawberries President and Keens' Seedling .. . 98			Campanula soldanellaeflora fl.-pl. .. . 111	Aspidistra in a Japanese vase .. 97	
	Vine borders, air for .. . 102			Cimicifuga racemosa .. . 110	Flowers and foliage, a Japanese arrangement of .. . 99	
Roses:—	Vine borders, watering .. 102			Coris monspeliensis .. . 110	Flowers, Japanese ways of arrangement .. . 97	
Rosa Andersoni .. . 96				Garden, notes from a Cornish Hatfield, hardy flowers at .. 111	Irises, a Japanese arrangement of .. . 102	
Rosa Celine Forestier .. . 95				Incarvillea grandiflora .. . 111	Irises in a Japanese bowl .. . 103	
Rosa Francois Michelin .. 96				Michauxia campanuloides .. 110	Mortlake, seed trials at .. . 112	
Rosa Killarney .. . 96				Michauxia Tchihatchewi .. 110	Pea sticks .. . 107	
Rosa Marchioness of Londonderry .. . 96				Ooothera missouriensis .. . 111	Peas, drives, and weed-killers .. . 106	
Rose Mme. Alfred de Rougemont .. . 96				Ostrowskya magnifica .. . 111	Weather in W. Herts .. . 112	
Rose Mrs. F. W. Landford .. 95				Pansy, Tufted, Blanche .. . 110		
Rose Rosette de la Legion d'Honneur as a standard .. 95	Garden Flora:—			Pansy, Tufted, Duchess of Fife and its sports .. . 111		
	Tulips, notes on .. . 102					

ORCHIDS.

LÆLIA JONGHEANA.

It is pleasing to record the re-introduction in quantity of this distinct and desirable Laelia. An importation was offered in the autumn of last year as Laelia prestantis. This importation was in remarkably fine condition, many of the pieces containing hundreds of bulbs. Some of these plants have since flowered and proved to be the rare L. Jongheana, which has been for many years practically extinct. Only two or three plants are recorded as having flowered from the original importation. The species having been determined, no time was lost in procuring the plants in quantity. Thinking a few particulars as to its native habitat might be of interest to readers of THE GARDEN, I sought an interview with Mr. E. Kromer, of Roaima Nurseries, West Croydon, where he has recently established himself as an importer of Orchids, &c., from South America. No one is better acquainted with Brazilian Orchids, and none more ready to give information that may be of use to the cultivator. In answer to my query as to the native habitat of L. Jongheana, Mr. Kromer gave me the following information: It comes from Central Brazil, from the State of Minas Geraes, growing on trees at an elevation of over 2000 feet. The conditions required for its successful culture are similar to those under which L. flava is found to succeed, but in a brighter and more exposed position, where it can obtain the maximum amount of strong light, shading only when the foliage is likely to become scorched from the direct rays of the sun. The most interesting information as far as the Orchid grower is concerned is the period at which it will flower. This, Mr. Kromer says, will, after the plants have become established, be during the months of January and February. This adds considerably to its usefulness, for it will be found most valuable flowering at one of the dullest seasons of the year. I saw with Mr.

Kromer plants that had recently been taken from the cases in splendid condition, many of them with their flowers expanded, but, opening in the secluded and dark conditions of the packing cases, very little form or colour could be determined. They were sufficient to recognise the plants by and to satisfy the most exacting expert as to their identity. In growth it resembles a gigantic L. pumila, but with more oval-oblong bulbs, the leaves also being flatter and thicker. The flowers are always produced on partially developed growths, which reach maturity almost directly after the flower decays. I noticed that the seedling plants do not flower in a very small state, but as soon as maturity is reached they bloom regularly every year afterwards. The small growth suggests its being best accommodated in baskets or shallow pans, so that it can be suspended near the roof glass or in a position where the maximum amount of strong light may be procured. Flowering in winter, as stated above, light will be a great consideration, especially in the neighbourhood of London or other large towns.

L. Jongheana was originally discovered by M. Lebon, who sent plants to M. de Jonghe at Brussels in 1854. It seems to have disappeared afterwards, and nothing was recorded of it until 1872 when a plant flowered in the nurseries of MM. Thibaut and Keteleer at Paris. In the following year a plant flowered in Messrs. J. Veitch and Sons' nurseries at Chelsea, and the following particulars were then given: The sepals and petals and base of the lip are deep amethyst-purple, the throat and centre, including the fine crenulate keels, yellow. In front of this the colour passes into yellowish white, while the crisped margin is more or less suffused with purple, gradually shading off into the white of the centre. Messrs. Veitch remarked in their "Manual of Orchidaceous Plants" (part ii., 1887) that it was then, fortunately, represented in several British collections. This statement is very questionable, and I have never seen it in any collection with the exception of Baron Schroeder's at The

Dell, Egham. One hybrid has been raised from the intercrossing of Cattleya Trianae and L. Jongheana, and named Laelio-Cattleya Baroness Schroeder, which was raised in The Dell collection. It was exhibited at the Royal Horticultural Society's meeting on August 23, 1892, and received a first-class certificate.

H. J. C.

Trichopilia lepidota.—This is an uncommon and very beautiful plant not unlike T. marginata, but with a deeper margin and pretty wavy lip. In habit it is similar, and it is occasionally imported with it. Its culture is not difficult when once it has been induced to root freely in the compost, and it likes best small pans with no more room than is necessary to easily accommodate the plant. During the season of active growth a fair amount of moisture is necessary, but the roots are very easily injured by over-supplies, especially in winter.

Cypripedium Sedeni candidulum.—In this fine form, which was raised by crossing C. Schlimi albiflorum and C. longifolium, the sepals and petals are white and the lip bright rose. It is a distinct and free-flowering Orchid of great value. Its relation to C. Schlimi is shown by its nearly always being in flower, while from its other parent it has inherited a fine constitution and habit, rendering it one of the easiest Orchids to grow. In an intermediate house lightly shaded the growth is very free, and it requires ample moisture.

Masdevallia muscosa.—This plant with its singular flowers with mobile lips is more plentiful than formerly in collections, and is very interesting. The stems of the flower-spikes seem by Nature intended to prevent the access of crawling insects to the blossoms, the lip of which seems to invite winged ones by its bright bit of colour. The slightest touch only on this is necessary to move the lip, and in a wild state no doubt the plant has its flowers fertilised by these flies or other insects alighting upon it and carrying away the pollen masses. The flowers are somewhat neutral in tint, but graceful and pretty. It is a native of New Grenada.

Cypripedium superbiens.—This is one of the handsomest of Cypripediums, and though an

old denizen of our collections, it is well worth a place in the most refined. The foliage is handsomely marked in the way of that of *C. barbatum* and the flowers are also similar in build. The immense dorsal sepal is white with lines of purple and green, the petals are more lightly veined and spotted with blackish purple, while the lip is a rich purple-brown. It likes ample warmth, a shady and moist position while growing, with a very plentiful water supply all the year round. Equal parts of peat, loam, and chopped Sphagnum, with some roughly broken crocks suit it well for compost.

NOTES ON DENDROBIUMS.

MOST of the evergreen section are getting over, *D. Farmeri* being one of the last to flower as a rule, and as there are not many of the Australian kinds in bloom as yet, the house devoted to Dendrobiums is not very gay just now. A few spikes of the useful white-flowering *D. Dearci* may be seen, and I have noticed *D. taurinum* in flower during the week, while a few others could be named that are showing more or less. Growth in almost every case is the order of the day, and where there are nothing but Dendrobes in a house the temperature should be kept well up and a brisk, moist atmosphere maintained. Shading is necessary only to a very limited extent, as the plants are better for all the light. Were it possible indeed to keep the atmosphere moist and at the same time admit plenty of air, there is not the least doubt that the plants would benefit by being exposed to the full sun, especially if the glass was good. Common glass has done a great deal of harm to fruit growers and growers of Orchids, and the presence of starred panes, often unsuspected by those in charge, is the cause of many a case of scalding. As a rule, it is safest to shade a little and close the house wherein they are grown early with ample moisture, at the same time drawing the blinds up. This will create the buoyant and stimulating atmosphere that these Orchids delight in, and the moisture settling on the glass will prevent scalding. Towards evening a little air should again be put on below, as it is not high night readings, but stimulating conditions by day that help the plants. The air at night prevents any likelihood of the growths being soft, and grown under these conditions the stems are more likely to flower freely, and not so liable to produce abortive, mis-shapen flowers as when they are grown soft and then hurriedly ripened. In many modern-built Orchid houses there are shallow tanks with hot-water pipes running through them, and these may now be kept filled, as the moisture given off in the atmosphere cannot possibly do harm at this time of year. A little sulphate of ammonia in these tanks occasionally has been found of great assistance, improving the colour of the foliage and the general health of the plants.

Many of the evergreen kinds of the densiflorum and suavisimum types will by now be finishing up, and may, if convenient, be placed in a cooler temperature. If not, the plants should be arranged near the door of the house, or in some position where the atmosphere is a little drier, for although they may produce and finish up another set of growths this season, the plants that continue longest in health are they that keep to an annual cycle of rest, flowering and growth each in its proper season.

There may still be some of the later-flowering specimens not yet potted, and these should be seen to without delay, for unless they are soon done the roots will not have time to get a good

hold of the new compost by the winter. It has been a good deal the custom in some places to leave these plants to get very badly pot-bound before repotting, under the impression that they flower more freely; but this idea must not be carried to excess, or the plants will get weaker every year and eventually die. This has caused in many cases the troublesome habit the plants have of ceasing to grow at the base. Most of this class of Dendrobiums will be found to do better in rather large receptacles and rougher compost than the deciduous kinds, the latter never being so much at home as when the roots are closely coiled about the inside of a small pan or basket. The manner of potting otherwise and the quality of compost are similar to those required for the other members of the genus. The pretty *D. chrysanthum* will soon be showing its buds and rather less water will be needed as the growths finish, but no attempt must be made to dry off and ripen this plant like the majority of its deciduous relatives. When it flowers, as it frequently does, with the green foliage still fresh upon the stems it is very pretty, and large, old specimens with pendent growths well flowered are grand for a couple of weeks.

Turning to such as *D. Phalenopsis*, *D. Johnsoniae*, and the majority of the showy Australian kinds, it will be noticed that in most cases young growths are starting from the base, and in the case of *D. Phalenopsis* higher up the stems as well. All such must now be brought well up to the light, for although these flower upon the young stems as well as the older ones, the blossoms are not nearly so freely produced in shady positions as they are when growing close to the roof-glass. The earlier deciduous kinds, such as *D. heterocarpum* and *D. crassinode*, will by now in many cases have finished growing, and by their removal by degrees the Australian kinds named will be made room for. Of course, the latter are much better in a position where they get the full light all the year round, but it is absolutely essential now that they are not shaded in the morning and after closing-time.

H.

Ronanthera Storiei.—When this plant was first shown by Sir Trevor Lawrence, Bt., some time ago it was awarded a first-class certificate. At the last meeting of the Royal Horticultural Society it was again shown, this time by Mr. Gurney Fowler, and by an oversight was awarded a first-class certificate under the name of *R. Imeschootiana*, which had previously received only an award of merit. At the time that Orchid was shown the rule that all plants which received any award were to be painted and the portraits kept for reference was not in existence, and had it been so, the mistake now mentioned would not have happened. A correction was subsequently made. —J. T. BENNETT-POE.

Dendrobium Dearci.—I consider that this plant is much better grown than formerly, and certainly finer specimens of it are exhibited than used to be the case soon after its introduction. Many hundreds of plants of it must have been lost during the first ten years it was imported, and possibly the rush for it caused it to be collected at an unsuitable time. There are few if any more useful kinds, especially for cutting, its flowers lasting well and coming in when Orchids are getting over. It likes a bright, sunny position towards the end of the growing season, and a thorough ripening and rest afterwards. The flowers are produced on the current year's growth, and sometimes the same stems flower again the next year. —H.

Lælia crispa.—This delightful old species is now finely in bloom, and there are few more beautiful at this time of the year, the contrast between the pure white sepals and petals and the

deeply tinted prettily fringed lip being exquisite. It is one of the best growers, thriving well in company with *L. purpurata*, which it resembles a good deal in habit and also in its other cultural requirements. Like it, the roots are most at home where large lumps of charcoal and crocks are plentiful in the compost and where free drainage is provided. The plants commence to grow in early spring, and at that time need careful watering. When the growths begin to root freely a lot of moisture is required, and this must be kept up until the flowers are past and the pseudo-bulbs finished up, when gradually reduce it a little. *Lælia crispa* is a native of the neighbourhood of Rio de Janeiro, and was introduced in 1826.

Odontoglossum Halli xanthoglossum.—This fine variety is now in good form with me, the spikes upwards of a yard in height and the flowers fine and of great substance. The ground colour is a greenish yellow tint covered with large blotches of chocolate-purple, the lip yellow and finely toothed. It is one of the easiest of all Orchids to grow, and will often thrive where *O. crispum* and similar kinds are a failure. For some reason it does not seem to take a very high position among Odontoglossums, but it is certainly worthy of all care. The roots are fairly persistent, and will thrive with rather more material about them than will those of *O. crispum*, this consisting of equal parts of peat fibre and Moss over good drainage. It is more or less active all the year round and no drying-off season is required, while during growth plenty of moisture may be given without fear. Those who have not the convenience of a cool Orchid house may grow *O. Halli* and its varieties very well in a cool, moist greenhouse or fernery, or even in a cold frame outside during the summer months. From May until the end of August it can hardly be kept too cool or the atmosphere about it too moist and shady. —H. R.

Cattleya Schofieldiana.—The flowers of this species are very striking and distinct, and it may be grown in any collection with advantage. From the top of the stems it produces a number of bold, handsome flowers, the greenish ground colour of which is covered thickly with bright crimson spots. Under cultivation it will be found to do well in company with *C. guttata*, *C. granulosa* and others of this class, preferring a medium-sized pot or basket, with the usual mixture as advised for Cattleyas generally. From the time the flowers are past until the growth again starts only just sufficient moisture should be allowed to prevent shrivelling of the stems and leaves, and even when in growth care is necessary, for if the temperature gets a little low, with undue moisture either in the atmosphere or at the roots, the stems are very apt to decay about half way up. This destroys the chance of flowers, of course, and is weakening to the plant. As with all Cattleyas of a like habit, the soft white scale insect seems particularly fond of *C. Schofieldiana*, and continuous care and repeated spongings are required to keep this pest in check. It is a native of Guatemala and first flowered at Newhall Hey, near Manchester, in 1882.

Stanhopea tigrina.—This quaint yet showy Orchid I have noticed in one or two places lately, and some plants I saw in a neighbouring garden had not been potted for over ten years. They were flowering abundantly none the less, and the blossoms were very fine. As a general rule, however, I should not advise leaving the plants so long without new material, as they are bound to suffer badly when pulled about after being so long in the old material. Provided they are carefully handled and not disturbed more than is really necessary, the plants are not, as is generally supposed, prevented from flowering again for years. I have often given *S. eburnea* a new basket after flowering in spring, and it has bloomed again in the autumn. *S. tigrina* is equally free-blooming, but does not as a rule produce flowers in autumn. The plants both do well in wire baskets in a mixture of Sphagnum Moss and loam, with a little charcoal mixed and some

large pieces of this material about the bottom and sides. These allow of the spikes pushing readily through either way, for in many cases they go straight down and in others they push from the sides. The baskets should be suspended in the warmest house and the plants frequently syringed to keep red spider in check.—H. R.

Epidendrum vitellinum.—This cheap and popular species is one of the best of all for cutting and wonderfully effective when arranged with such kinds as *Odontoglossum Alexandræ* or *O. Pescatorei*. The bright vermillion of the *Epidendrum* shows well against the white of the *Odontoglossums*, and the time the flowers remain in good condition without in any way harming the plants is remarkable. No special house is required for this Orchid, which is well worth a place in a cool fernery, where the bright green of the foliage and the showy blossoms are very pretty against the Ferns. The plants thrive in equal parts of peat and Moss in pots of medium size, and though the roots are not fastidious, they dislike being disturbed oftener than is really necessary. Give the plants a fair shift when they are needing it, preferably in early spring, and remove at the time all decaying roots or sour compost, washing the whole of the roots in a bad case of decay and using pots of smaller diameter than usual. The plants delight in copious moisture when the weather is bright and they are growing freely, always provided the pots are well filled with healthy roots, and light overhead syringings are refreshing and beneficial. The plant should be purchased in bloom when possible, as the flowers vary greatly in point of size.

Wild Orchids.—These have been unusually fine this year, the dripping June having suited such kinds as *Orchis pyramidalis*, certainly one of the most beautiful of the British species. Here it is one of the most common, and one can see the many variations in shape and colouring so noticeable in indigenous species as well as exotics. The species in question varies from a very light mauve to the deepest crimson-rose and is beautiful in all. The spotted *O. maculata*, though less bright than *O. pyramidalis*, is very fine, the long, loose racemes occurring in all sorts of positions, but always finest in shady, moist places. A few spikes of the distinct *O. ustulata* have been noticed this year, but though more rare it is less attractive than the others, and I have picked a few spikes of what appears to be a hybrid between this and *O. pyramidalis*. No doubt there are many hybrid forms in these wildings, and unless I am much mistaken I have noticed traces of *O. mascula* in some of the earlier spikes of *O. maculata*. In a cool, shady wood the British Butterfly Orchid flowers well and late, and I have spikes of it now mixed with other hardy species, and very pretty is the contrast between the creamy white tint of these and the bright red of *O. pyramidalis*. Quite a different style of plant is the Bee Ophrys, and rarely found in this neighbourhood. In the chalky hilly districts in the south of England it is common, but easily overlooked on account of its size.—SUFFOLK.

Vanda Sanderiana.—Quite distinct from all other Vandas—indeed, from every other Orchid—this is a noble and effective plant, and it is a pity that it has not led to cultivators giving the genus more attention. Coming as it does from the Philippine Islands, this *Vanda* delights in ample heat and moisture while making its growth, and all that is necessary is to see that a moderate amount of air and ample light are secured to the plants, so that the growth is in a manner consolidated. Like the *Phalaenopsis* from the same region, it needs heat—sun-heat for choice—and as this cannot be had in this country in conjunction with air in plenty, the best thing we can do is to see that the atmosphere is not kept closer than is really advisable, and that during dull periods even in summer a little warmth is kept on the pipes to keep the air moving. Unlike some Vandas, this species does not seem to push its roots so far in search of moisture, and the healthiest plants I have seen have always been

those that have had their roots packed rather closely together in the baskets. Here they take ample moisture, and are far more healthy and longer lived than they would be in a large receptacle with a lot of wet material about them. For compost, nothing but clean, freshly gathered Sphagnum Moss, kept well apart by the addition of charcoal and crocks, need be used. Keep this very moist during the time growth is active and up to and including the flowering season, but in winter *V. Sanderiana* likes a distinct rest, and at this time at least does well in the *Cattleya* house. Suspend the plants in a good light, and water only sufficiently to prevent the foliage shrivelling, or the plants will not flower freely.

PARK AND WOODLAND.

THE CORSICAN PINE.

(*PINUS LARICIO.*)

THE Corsican Pine attains sometimes to a height of close upon 150 feet and a circumference of 17 feet or 18 feet. The stem, which is much oftener cylindrical than conical, divests itself very slowly of its lower branches when growing in or on the borders of open clumps, but more rapidly when growing in dense masses, and finally becomes quite bare of branches from the summit downwards. In a tree 80 or 100 years old, or older, the summit becomes flattened in consequence of the bending of the leading shoot. Five-sixths of the length of the tree at this age is good timber. The cover afforded is at first thick, and becomes light only after the tree attains its maturity; even then it is not so light as *P. sylvestris*.

The Corsican Pine is found in mountainous regions. It makes its first appearance often along with *P. maritima* at an altitude of 2789 feet, and is found as high as 5578 feet, at which altitude it is only a stunted bush. It does best in a clayey gravel soil, and it attains its fullest development on fairly cool soils. Its growth in diameter is not rapid. The timber of the Corsican Pine is white in very abundant layers, and varies from a rose-red to a brown-red according to its quality. The autumn tissue of each layer is clearly marked and of relatively great thickness. The resin ducts are very plainly seen, and contain a thick turpentine, which by filtering through the tissues and impregnating them with abundant resin often renders the wood as hard and translucent as horn. The wood has a fine close grain. The timber of this Pine is excellent for building. The feebleness and evenness of its annual growths—in which it bears a certain analogy with *P. sylvestris* of the north—joined to the fine dimensions which it attains to, gave rise to a hope that, like *P. sylvestris*, it would furnish masts of the first size. Experience has not justified this hope. The wood of the Corsican Pine is too charged with resin and too heavy; its fibre is short and of little solidity, as is proved by numerous small cracks produced by desiccation and shrinkage; it is wanting in suppleness and is brittle. The French naval authorities have for these reasons refused to use it for masts, for which purpose it is nevertheless used in the Italian marine. This excess of resin where it exists also renders the wood less valuable for industrial purposes. It furnishes, nevertheless, planks for the Toulon Arsenal, and there is no doubt it makes excellent and lasting sleepers for railways.

The qualities of the Corsican Pine are besides very variable, and an attentive study of the circumstances—formerly little known—which determine these qualities will doubtless govern the production. It seems, however, per-

missible to affirm that, considering the slowness of its growth, its value will always be very high, and that to regulate this it will be proper to consult much less the dimensions of trees and the thickness of the last annual layers than the volume and development of the perfect wood which alone is useful. It has yielded essence of turpentine, resin and pitch of good quality, but insufficient to pay for the outlay.—*Flore Forestière.*

ROSE GARDEN.

ROSE CELINE FORESTIER.

THOSE who are in the habit of closely pruning all their Roses irrespective of kind or habit will have only a moderate opinion of this pretty variety, but when it is allowed to ramble almost at will, simply cutting out any very weak or old wood and stopping extra vigorous shoots, what a beautiful thing it is. It is so distinct in habit and the colour and shape of its flowers as not to be readily mistaken for anything else, and here it is nearly always at its best after the first flush of Roses is over, and consequently fills a gap. A little observation of the way this Rose flowers will show the fault of pruning closely every year. The ends of the new shoots flower it is true, but the majority of the blossoms occur upon laterals produced from the side of the previous year's wood, so the more this is shortened the less flower is produced, and, again, the pretty and distinct habit is lost. Although Celine Forestier flowers well against a wall, I never like to see it in such a position. It is true the young wood may be laid in and retained almost wholly, but unless these shoots can hang naturally, the plant loses a lot of its elegance and grace. It is not so bad when, as frequently seen in cottage gardens, it is nailed up to the wall, the shoots being allowed to push out a yard or more from it. This freedom enhances its appearance materially, but Celine Forestier, like Aimée Vibert and one or two others, never looks so pretty as when allowed to take its natural form, on the grass for choice. The foliage is pretty at all times, and there are nearly always a few flowers to be seen, and, as noted, just when there is a scarcity of bloom in the Rose garden it is usually at its best. Roses as a whole attain their finest proportions on a rather heavy soil, but this variety does best on a medium or light one, and if the position is a fairly sheltered one, so much the better. Light soils need a lot of manure, and it is useless to try and grow a great mass of foliage and flowers in a poor, hungry soil. When the border or station for it is made, the bottom spit where the soil is light should be well enriched with cow manure, this being of a cooler nature than that from the stables or piggeries. Again, if the hose can be laid on and a thorough soaking of water given at the roots in very dry weather, it is well repaid by the increased freshness and vigour of the plant.

GROWER.

Rose Mrs. F. W. Landford.—The colour of this beautiful sport of Mrs. J. Laing is all one could desire, a clear pale blush, shading to white. I fear it will turn out to be inferior in substance to the variety it originated from, the chief defect being a hollow centre. Whether it will improve as a cut-back remains to be seen. If it does not, I do not see we shall gain much by its introduction.—P.

Rose Rosetta de la Legion d'Honneur as a standard.—This Rose makes a really handsome standard, as, indeed, will most of the so-called climbing Teas and Hybrid Teas. The shoots are elegantly disposed, there being no crowded or heavy appearance whatever. The flowers when open are not exceptional,

the main attraction being the yellow band down the centre of the petals. The buds are really charming, making a lovely little rosette of a bright carnation-red, with a slight orange shading. Three or four of these tiny buds make a neat and pretty button-hole.

Rose Francois Michelin.—This fine Rose has been somewhat eclipsed by better autumnals of its own colour, such as Helen Keller, for in reality Francois Michelin is but a summer Rose. This should not, however, prevent its inclusion in any good collection, as one does not miss such kinds in autumn when the numerous Hybrid Teas, Teas and Bourbons abound. It is a splendid Rose both in form and colour, and recently received the silver medal as the best Hybrid Perpetual in the show. It makes long slender growths quite distinct from other kinds in habit and also in the peculiar light, greyish green wood. These growths should be left at a good length when pruning, even as much as 18 inches from the last season's pruning. It is well suited where a tall mass is wanted quickly. As is now generally known, Mr. Bennett was fortunate enough to seed this Rose, one result being the superb all-round Hybrid Perpetual Mrs. John Laing. This was a striking proof of the value of cross-fertilisation, for hitherto this variety, so far as I am aware, was never known to produce seed.—P.

ROSES ON PILLARS AND ARCHES.

"H. R." asks for the names of a few Roses that will quickly furnish themselves at the top. Unfortunately, true running Roses that flourish best in this country have in most cases very small flowers. On the Riviera and the Continent generally one often hears of Cloth of Gold, or Chromatella, as it is called, Maréchal Niel, Lamarque, &c., clambering away in wild confusion, but it would be useless attempting to grow such kinds upon trellises in our country unless it were in the south. There one can find Climbing Devonensis, Fortune's Yellow, the Banksians, and similar Roses making most luxuriant growth. "H. R." complains of Crimson Rambler and Roses of that class becoming thick at the base. I do not look upon this as a fault; rather the reverse. It is from the new growths constantly starting out from the lower parts that the healthy condition of a climbing Rose is maintained. This is far better than seeing long, scraggy growths with just a bloom or two at the top. If a good furnished top is desired to a trellis, I would recommend "H. R." to bud some of the kinds named below upon tall standard Briers, the tallest he can procure. In many old hedges and quarries I have obtained Briers with 7-feet to 8-feet stems. If these were planted in their permanent positions, a good plant would be secured in a year and a half. In the meantime the same variety could be planted at the base. This plant in the period stated would reach up to the standard, and the object desired be partially, if not wholly, gained. As "H. R." truly remarks, a great deal of feeding is necessary for these climbing Roses. I have often urged this in these columns. They really require treatment something after a Vine. It is a great mistake to plant climbing Roses in any ordinary soil. The borders should be well trenched and plenty of manure added. Some bone-meal in addition would be advisable, and where the soil is not particularly good a cartload or so of one-year-old meadow loam would repay the expense. To induce these climbers to break more from the upper part of the growths, much can be done by early stopping of the bottom laterals, and if the growths become too thick at the base, then remove them and divert the sap to the upper buds. By stopping the shoots at the top about this time of year they become more ripened and more likely to come through a winter uninjured and break out at the top the following spring than they would if allowed to continue making a soft growth. It is the injury from spring frosts to the unripened wood that gardeners have so much to fear from the better class of clambering Roses.

As worthy companions to Crimson Rambler there appears no doubt that the three varieties

named after the three Graces—Aglais, Euphrosyne, Thalia—will be in much demand. They have the free, rambling habit of the multiflora tribe. Aglais is canary-yellow in colour, the flowers produced in large, pyramidal bunches. Euphrosyne has also large bunches of pink bloom, and Thalia is a semi-double form of the Polyantha simplex. These Roses grow well, but they require time to furnish themselves ere one can have much bloom. Claire Jacquier is grand. It makes enormous growths, and when established about three years is smothered with large trusses of pretty double pankeen-yellow flowers something like Perle d'Or. It is, unfortunately, not quite hardy and would need watching in severe weather. For rampant growth the new hybrids of Rosa Wichuriana are unequalled. They are really creeping Roses, but would look equally beautiful on a trellis. The leaves are bright and shiny and the flowers of the newest kinds are said to be of good size, although mostly single. There are about nine varieties of various colours, such as white, cream, blush, pink and carmine. A really splendid grower is Reine Olga de Wurtemberg. I know of no more luxuriant climber than this and it is almost evergreen. The semi-double brilliant red flowers are most showy and picturesque, and I should say that this, together with Mme. Alfred Carrière, would be two first-rate kinds that would meet the requirements of "H. R." I have seen Mme. Alfred Carrière growing as freely as one could possibly desire, and its fragrant creamy white flowers are freely produced.

The Garland is a most vigorous grower, producing when well established immense corymbs of buff coloured flowers that are very pretty in the mass. The Ayrshire and Evergreen Roses, such as Félicité-Perpétue, with its lovely little rosette flowers pure white in colour, furnish some of the fastest growers. It is one of the best companions to Crimson Rambler, blooming about the same time. Ruga, blush-pink, and Flora, shell-pink, are both first-rate rambling kinds. Mme. d'Arblay is a very luxuriant grower, but its semi-double tinted white flowers are not very conspicuous. Daniel Lacombe is a very pretty flower, and, what is more to the purpose, it grows well. The colour is chamois-yellow, tinted with rose. Laure Davoust would doubtless be a kind "H. R." is looking for. Its double flowers are of a very beautiful blush-pink shade. Jaune Desprez is a fine old variety belonging to the Noisettes, and will certainly grow well and is almost hardy. Its flowers are a mixture of buff-red and sulphur. Another most useful Noisette is Aimée Vibert. This Rose may be seen in country places completely enveloping cottages with its snowy white blossoms and shiny green foliage.

PHILOMEL.

Rose Marchioness of Londonderry.—Magnificent is a term often applied to this Rose. It well deserves it when about half open, its deep globular ivory white flowers being so clean and beautiful. But the beauty of the flowers is not maintained, the full-blown blooms being anything but pleasing; indeed so repulsive are they, that I would advise anyone growing this Rose to remove the flowers ere they reach this objectionable stage. This year the variety has been grand upon two-year-old plants, and even now the maiden bushes are yielding some delightful flowers that look something like large Magnolia blooms when about to open. Marchioness of Londonderry is evidently of the Victor Verdier race.—P.

Rose Killarney.—In point of colour I know of no Rose with such delightful freshness as the above variety. The term shell-pink is often employed when desiring to describe a peculiar clear pink, and this designation aptly describes Killarney. There is also a faint white edge to the petals. As individual tastes differ so much, this Rose will gain admirers by reason of its semi-double character, but by others, especially exhibitors, this thinness will be deplored, for the lovely petal and conical centre raise one's hopes, only to be dashed to the ground after the bloom

has been boxed up for a few hours. As a garden Rose it will be much esteemed, for it flowers as freely as Mrs. W. J. Grant, from which I should imagine it to be a seedling. Killarney grows well and blossoms abundantly, and I shall not be surprised to see many lovely seedlings emanating from it.—P.

Rosa Andersoni.—To term this an improved Dog Rose would not be far wrong. It is indeed a most profuse bloomer. Taking this fact into consideration and also remembering that its flowers are each 3 inches across, it would seem to be worth cultivating, although the line must be drawn somewhere, or our gardens will be overstocked with these pretty, but fugitive varieties. In general appearance the flowers are very much like those of the hybrid Sweet Brier Amy Robsart. Andersoni has an unusual abundance of golden anthers, which gives it a somewhat rich appearance, especially when the variety is planted to form a hedge. It is well adapted for this purpose, its growth being more compact than in many of the single kinds. Almost every exhibit of garden Roses put up this year contained Andersoni, which proves it to be a general favourite.

Exquisite tints of some recent novelties in Roses.—Most interesting is it to learn from such a good authority as M. P. Guillot the history of that charming Rose Mme. Laurette Messimy. As he justly remarks, it has indeed created a new type. Can it be that his later productions are the result of similar crossing? Mme. Eugène Resal is even more delightful in colour than Mme. Laurette Messimy, and there seems to be a wonderful affinity between this latter kind and the newer Tea Roses, such as Souvenir de Catherine Guillot, Mme. René Gerard, Souvenir de J. B. Guillot, Mme. René de St. Marceau, and Margherita di Simone, all of which it is impossible to do full justice to in describing their colours. I should like to see some attempt made to increase the size of this class of Rose. At present the fullest of them is Souvenir de Catherine Guillot, a variety that has been much admired this year, the orange shading making it even a more general favourite than l'Idéal.—P.

Rose Mme. Alfred de Rougemont is a charming little Rose belonging to a most useful group that produces the welcome blooms just when the Hybrid Perpetuals are waning. For free flowering, the Noisette Perpetuals are almost equal to the Tea-scented, but, of course, do not approach that tribe in beauty and refinement of blossom. However, they are valuable garden Roses, although mostly of white or pinkish white colours. Mme. Alfred de Rougemont has pretty red buds, that show up well among the white, delicately tinted flowers. If used in the flower garden, the centre plants should be trained as pillars and the outer row pegged down if necessary. This method is adopted on the Continent, and it certainly has the merit of boldness. Even with such Roses as Camoens and Marquise de Salisbury a less formal effect would be produced if the centre plants were somewhat elevated. Nearly the same results may be achieved if half standards and dwarf standard plants are used for the middle of the bed, but these are not always obtainable. Other good Noisette Perpetuals would be found in Coquette des Blancches, one of the freest and best white Roses, and Mme. Auguste Perrin, a delightful Rose, with light and elegant flowers, pale rose in colour, the reverse of the petals whitish. In Mme. Fanny de Forest, a large Rose for this group, the flowers are a salmon-white, changing to a rosy white. Mme. Francois Pittet has beautiful red buds, which are charming among the small snow-white double flowers. Mlle. Blanche Durrschmidt is an exquisite blush-white Rose, with very loose flowers, which are produced in large clusters, often as many as seventeen buds and blossoms upon a single truss. Paul's Single White, a very pure white and withal a free bloomer, is quite at home upon an arch, wall, or pillar, the large white blossoms being very showy.—P.

JAPANESE WAYS OF ARRANGING FLOWERS.

MR. EIDA, a Japanese, well known in London for the introduction of the bronzes of his country, has opened a little exhibition of flowers arranged in the Japanese way at No. 5, Conduit Street, Bond Street, in which one can see—though no doubt to much disadvantage owing to the difficulty of finding the sort of plants the Japanese use most—ways very different from our own of arranging flowers. There is a good deal of very curious and subtle writing about this in a list he publishes, such as the following:—

Several styles are practised—as the Koriu, the Enshiu, the Mishi, and the Ikenobo—and in each of these are various schools, each with its own interpretation of the universal rules, and each with its own secrets of manipulation. And among all of them curious traditional meanings are attached to the parts that go to make a flower composition. Thus, in the general formula of Ten-chi-jin, the three main stems stand for the heavens, earth, and mankind. A tall, almost upright, leaf or stem will represent Ten, the sky; a lower leaf carried in a sweep almost horizontal is Chi, the earth; while a third, on the opposite side and higher than Chi, though lower and smaller than Ten, is Jin, the people of the world. A five-leaved formula represents wood, fire, metal, earth, and water. But none of these formulæ is allowed to disturb in any way the attainment of pure beauty in the result. Indeed, they act rather in the manner of mnemonics, keeping the laws of the art before the eyes of the pupil, just as do the principles of In and Yo, or male and female—a formula recognised through all Japanese art. In the matter of flowers, the upper surface of a leaf is called male, the lower female; buds are female and full blossoms are male; blue is male and yellow female, and so forth; and the proper proportioning of male and female in flower, leaf, stem, and colour ensures harmonious blending in the result.

But when one looks from words to things, the difference of the Japanese way is simply that of recognising the beauty and importance of form, and of showing the whole beauty of the plant, instead of the too common way of jamming things into nose-gays, in shape like a Cauliflower. The result of the latter we all know, and it is a very rooted habit in England. Indeed, it runs through all our flower-market work, and leads the excellent Rose growers of London to send their flowers to the market with the heads cut close off and without a bit of stem, so that one cannot place a Rose in any natural and simple way if we depend on such supplies. In Paris, and also in America, Roses are sent to the market with fine vigorous stems, and there need not be the slightest difficulty in cutting them here in like ways. In our country the beauty of the whole plant is not thought of, but simply the flowering part. The Japanese way is the very opposite of this. They are satisfied with a much less quantity, and even the commonest things, such as a spray of Larch,

a stem of Solomon's Seal, or a tuft of Iris, are arranged so as to show the whole beauty and stature of the plant, form of leaf, bud, and flower, and never too much of it. No doubt it is a very important lesson to learn, though as we see Japanese arrangements done in England it sometimes occurs to us that the same results could be obtained in a simpler way than those of the Japanese. They, in working in their beautiful bronze vases, take an amount of pains which, we think, is not always justified by the result; the more so as in our country we can



A growth of the Parlor Palm (*Aspidistra*) in a Japanese vase.

have a greater variety of vessels, many so shaped as to receive a flower at once and to show its beauty completely. Some of the Japanese skill arises from the need of adapting things to their bronze vases which seem to be most in use with them.

One of these Japanese artists in flowers, looking at some of our pictures of flowers by Mr. Moon, at once said, "Why, these are our ways of arranging flowers!" simply because of the fact that the artist had chosen a very few simple things, and shown them in their full beauty. The Japanese attach, and rightly, much more importance to form than English growers do. Their difficulties of getting plants

in this country to show this are serious, because in our markets, as we said before, all the flowers are cut in quite a different way, and much less attention is given to form, whether of the foliage of flowering plants, often very fine, and reeds, grasses, Bamboos and tree shoots.—*The Field*.

ORCHARD AND FRUIT GARDEN.

THE STRAWBERRY SEASON.

IN provincial towns at least how difficult is it to get a dish of Strawberries fit to eat or to put on the dessert table. First they come into the market half ripe, and when they are ripe they are tumbled down even in the respectable fruiterers' shops in a greasy, fermenting heap, unfit to look at, let alone eat. And yet there is no fruit that can be set up more temptingly than the Strawberry when gathered clean and ripe, and no fruit that has a surer sale. Even in country places there is a ready demand for Strawberries, and if they are provided fresh and ripe, the highest price can always be got for them. The curious thing is that people who have good but small gardens seldom grow Strawberries well, simple as their culture is, although for garden parties and dessert there is always a brisk demand during the season when the genuine article can be got. As a rule our outdoor Strawberry culture is not of a high order, and few growers seem to realise what an extraordinary difference culture makes to the Strawberry. No fruit responds more readily to good treatment, and it is almost as easy to have a good crop as a bad one. The best Strawberry grower I ever knew was Mr. McEwan, who long ago used to be at Chiswick, and who died early. He was an enthusiast on Strawberries, and published a pamphlet on the subject, showing what could be done by high culture. His crops of fruit from runners layered only the previous autumn quite surpassed those commonly got from well-established plantations. From the way plantations are usually made, one would think that getting a crop of Strawberries under two years was considered an impossibility; whereas runners layered in July and planted out in August produce the following year the largest fruits and the heaviest crops proportionally. For forcing no one would think of using two-year-old plants; the last year's runners only are used. These in the open quarter may be planted more thickly than they are to remain permanently and be thinned out at the end of the second year. It is not realised that the Strawberry can by good culture be increased to two or three times its normal size and weight, which means an enormous increase over a plantation say an acre in extent.

There is an opening for anyone who would simply supply rooted Strawberry runners early in August for planters at a reasonable price, but nurserymen who go in for Strawberries as a speciality do not seem to understand the business. I have before me a catalogue in which all the sorts are priced at 5s. per 100 rooted runners, such as one can find about this season in any Strawberry quarter without trouble and that have rooted without assistance. I have had samples over and over again of these so-called "prepared" runners—just weeds from which no crop could be expected for two years. Plants of the same age and not much stronger, rooted into pots, are priced at 15s. per 100. As the price of a 2½-inch pot is so infinitesimal as not to affect the price of the Strawberry

plants, one wonders where the value comes in. Not only that, but the pot plan of layering Strawberries for sale is a thoroughly bad one. The pots are rarely plunged, and the layer is parched and stunted from the first. No plant takes to the soil quicker than a Strawberry, and if the runners are layered (as soon as they can be pinched beyond the first joint) in a small ridge of light, good soil laid between rows they will root surprisingly fast, and will lift and transplant without turning a leaf in August.

RAMBLER.

STRAWBERRY VICOMTESSE DE THURY.

I WAS very pleased to see that this useful old Strawberry is thought well of by Mr. Burrell. The larger varieties have ousted this and a few other good old sorts from many gardens, but where ground is limited and the most has to be made of the crop, gardeners cannot afford to dispense with Vicomtesse. As Mr. Burrell remarks, the earliest-formed fruits are quite large enough for dessert, the successional ones, which on fair soil are produced in great quantities, being excellent for preserving. Moreover, I have not yet met with a soil which would grow a Strawberry at all in which Vicomtesse was not at home. Some years ago, having a badly constructed, ill-ventilated lot of glass houses to deal with, I found it most difficult to secure a decent set of fruit on the majority of forcing varieties. I succeeded very well with Vicomtesse for some time, but was induced to abandon it for other larger sorts. After repeated failures I was glad to go back to the old favourite. In the houses referred to Peaches were grown, and the necessary syringing of the trees kept the atmosphere too close for the Strawberries when in bloom, and, no matter how good the plants or strong the bloom-trusses of most sorts I tried, a satisfactory set seemed impossible. Vicomtesse, however, always set enough and to spare, and with judicious thinning and assistance with liquid manure the fruit swelled to a very good size. The finest forced fruits of Vicomtesse I ever saw were at Gunton Park. The runners, which were secured from young, vigorous stock plants, were potted in a good holding loam, and the fruit when swelling assisted liberally with that best of all Strawberry stimulants—farmyard liquid. Had I not known for certain what the variety was, I should have taken it for another and much larger variety. Mr. Burrell also mentions Black Prince as a favourite with some for open-air culture, the fruit to be used for stewing or preserving. I can remember when this Strawberry was very generally grown for early forcing, and still think that where earliness is of first importance it is well worth growing in limited quantities. Old growers used to pot up the runners in $\frac{1}{2}$ -inch or 5-inch pots, feed them well, so as to secure good prominent crowns, and start the plants in November by giving the roots the benefit of a gentle bottom-heat of leaves. This had the effect of inducing root-action, while as yet, in consequence of only a moderate top-heat, growth proceeded very slowly. Gardeners with convenience requiring extra early fruit ripe, say, in February would by adopting this plan find any extra labour incurred well repaid. I am glad to find some gardeners still clinging to that good old Strawberry Keens' Seedling, as I have always found it a good setter, though not one of the best for travelling.

B. S. N.

Strawberry Waterloo.—One of the finest dishes of this well-known Strawberry I have seen was staged by Mr. Church, of Milford Hall, at a local show last week. The berries were of quite a deep claret colour, shining as if varnished, and a most regular dish as regards shape and size. Waterloo is not everywhere a success, and at Milford, as elsewhere, it is found to succeed best when allowed to remain on the ground longer than other kinds. The flavour is fairly good, and being late it comes in very useful as a distinct addition to the dessert. It will not thrive in all

soils, and I think is most at home on a light soil planted behind a wall with a north aspect. Another really good Strawberry that makes it a good companion is Eleanor, but this, like many other kinds, seems almost forgotten in many places.

Strawberries President and Keens' Seedling.—Pity "H. R." did not give some indication of locality before telling your readers of his semi-failure with these generally healthy and robust varieties on page 66. Unless on stiff or sodden soils, I never remember the leaves of President getting yellow. Most Strawberries may, however, on clay. Perhaps your correspondent would also say what he found wanting in Keens' Seedling. It could hardly be fruit, for its constant and abundant fertility is proverbial. It could hardly be foliage, though that is neither so high nor wide as that of Royal Sovereign. Neither does Keens' lack quality if eaten at home, where its soft, sweet, sparkling juice satisfies the palate beyond most varieties. Keens' has also the merit of being all and wholly eatable, no green or white hard ends. Not a few readers of THE GARDEN will probably be surprised to hear of Royal Sovereign superseding President or Keens' so generally in the west, for the additional rainfall in the west fosters the tendency to an excess of foliage on Royal Sovereign, which has been noted in most quarters out of doors and under glass as a fault.—D. T. F.

POTTING YOUNG STRAWBERRY PLANTS.

STRAWBERRIES raised in exposed gardens and in hot soils, and which are intended for forcing, will have to be carefully dealt with after the recent spell of hot weather. Even where growth is vigorous and the dreaded spider seldom attacks the foliage, it is not wise to pot up the young stock before cleansing them by the application of sulphur water. Sometimes people make a mistake in leaving the plants fully exposed to sun and wind on the open quarters until time can be spared for potting. It does not take long to sever a few hundreds from the parent plants and remove them to a shaded position behind a north wall. This has always been my practice, and while there I always rid the foliage of any trace of spider by first laying the plants on their sides and then well syringing the under-surface of every leaf with sulphur water of sufficient strength that when dry a thin yellow coating is perceptible. In my opinion there is no application to equal this. Late-rooted plants of backward varieties intended for planting in the open garden or for pricking out into nursery beds in autumn in readiness for final transplanting in spring should also be treated similarly. In potting, be careful to use the soil in a semi-dry state, as when the least wet or clammy the balls often leave the sides of the pots afterwards and cause great trouble. For many years I used to ram in a cube of loam round the roots when planting. This gives them a good start, and is especially to be recommended in light or none too good Strawberry soil. It is astonishing also what benefit is derived from a moderate mulch of, say, leaf-mould or old Mushroom manure. There is no necessity for covering the whole surface of the bed; a foot round each plant will suffice. Some stand all newly-potted Strawberries behind a north wall for a time, and although I do not consider such a course necessary in the case of strong, vigorous plants, a week in that position is very beneficial for weakly plants or those damaged by spider.

B. S. N.

Strawberries in the open ground.—"H. C. P.'s" note (page 65) would prove far more useful were some idea given of locality. It is little wonder, however, that 7° of frost on May 5 should blacken many blooms. That it should have caused such injury to such varieties as Scarlet Queen, Royal Sovereign, and John Ruskin as to make them a failure would no doubt be more intelligible did we know the county they grew in. It will surprise some to hear that

these three sorts do not grow strong on our light soil. Again, locality would explain the fact that no Strawberries had been gathered in the open air till after June 24, which so far was fortunate for your readers, as it enabled your correspondent to tell us all how useful he found Leader from a cold frame. Leader is also said to be a grand variety. Monarch side by side has not half the crop, and Scarlet Queen has suffered less than on sunny borders. I found out years ago that such borders are not the best for either safety or flavour, and by the simple expedient of growing Strawberries on every possible aspect we may not only ensure a better crop, almost double the length of the season, but raise the standard of quality. Fierce sunshine to such fruit as Strawberries is almost as fatal to flavour as frost. I agree in the main with your correspondent's remarks on mulches and their effect on flavour, local temperature, &c., unless in his emphatic preference for Oat straw. One of the best Strawberry growers ever known to me used to mow a portion of the deer park every year, convert it roughly into hay, and then mulch with it.—D. T. F., *Edinburgh*.

PROFITABLE RASPBERRIES.

NO doubt Raspberries in many gardens are scarce this season, owing to the injury the canes received last March. Shelter is a most important point when planting Raspberries, the lack of this so often telling most unfavourably against market growers. Even where the new growth escaped uninjured, root drought will have materially affected the crop and the canes for next season's fruiting unless the ground is in good heart and fairly retentive. I have noticed what tall, stout canes Raspberries make in a dripping season, fine fruit and plenty of it resulting the following year provided the autumn is sunny enough to mature the canes. In gardens where labour is limited, timely removal of the old exhausted canes and thinning out the new are often neglected, in fact postponed till winter or spring, but an effort should always be made to perform the work in season, or the loss in all ways is irreparable.

There are, I think, few gardens where hardy fruit is esteemed in which Superlative is not grown. I saw on July 17 at Beeston Park, near Norwich, some grand specimens of this fine Raspberry. They reminded me in size of Vicomtesse Strawberries, and being gathered for dessert with a portion of stem attached looked very handsome. The soil at Beeston is fairly deep and inclined to be strong, and in hot summers retains moisture well; the garden is also well sheltered by surrounding woods and is an ideal home for Raspberries. I do not assert that Superlative is the best flavoured Raspberry, as if it really comes to quality I should say the old Fastolf leads the way, but the vigorous constitution, free bearing, and firmness of the fruit which fit it for travelling a long distance have made it a great favourite, especially with market growers. Baumforth's Seedling is certainly a splendid variety, as, given good all-round treatment, it grows vigorously and yields freely, the fruit being large, round, deeply coloured and of good quality. It did well with me in a light soil, being liberally mulched annually. That it also has a hardy constitution is, I think, proved by its standing almost quite uninjured the terrible frost of February, 1894. Norwich Wonder has been well spoken of several times in THE GARDEN, and is no doubt an excellent all-round variety. I think Mr. Wythes has stated that he has not found it suitable for a shallow, warm soil. Anyone, however, whose root-run is fairly deep and moist may with confidence plant it, as it is a favourite with some market

growers, who do not as a rule grow any fruit the second year that is not profitable. I do not think it wise for gardeners to plant large breadths of any untried Raspberry any more than Strawberries, as soil and general surroundings affect various sorts in different ways. What I recommend is planting a few canes only at first, and if the variety is found satisfactory, to increase it. Northumberland Fillbasket, Carter's Prolific and Hornet are all favourites in some quarters, and in forming large plantations it is decidedly advisable to plant two, three or more varieties, as, like Strawberries, some do better in certain seasons than others. Superlative has perhaps one drawback—it requires to be well ripened before it will leave the stalk, and of course market fruit is best in an under rather than an over-ripe condition. Although I still think that a greater weight of fruit can be obtained from a given area by the old-fashioned mode of training on stakes, yet doubtless finer crops result from tying thinly to cross wires.

B. S. N.

Strawberry Empress of India.—I was pleased to see the note by "H. R." (p. 3) on this delicious Strawberry. "H. R." describes his soil as heavy and stubborn, in which a percentage of his plants of Empress of India collapses during winter. I fancy this Strawberry enjoys a good holding rich loam, and I think that "H. R." could, by incorporating a sufficiency of opening material, render his soil suitable for the Empress. My idea is that one good way of managing it is to grow it in beds well prepared early in the season and to plant good healthy parent plants in spring, selecting three or four runners which spring from it and pegging them down at equal distances round the parent; good results may then be expected the following summer. The flavour of Empress of India is so rich, that any extra trouble taken to make it at home is amply repaid.—C.

Peaches and Nectarines in the south and north.—I think in the south we have much less fruit than in the north. This not only applies to the Peach and Nectarine, but other fruits. This season our Strawberries suffered very much, as when they were in flower we had a cold wave for some ten days, whereas in the north at that period the weather was milder; in fact, though there was snow late in the spring it did less damage than the cutting winds we experienced with heavy rain and frost combined. Of course, growth being from a fortnight to three weeks later in the north, there is a better chance to escape spring frosts, and there is also a much greater rainfall in the growing season. I am surprised to see what good crops there are on walls protected with a thick covering only used at night or in the daytime in severe weather. If we

had had a more efficient protector in the south, in many cases we should, I think, have had more fruit. I am not much in favour of warm coverings in mild seasons, but in a spring like the one just past the trees need protection when in flower. The value of movable copings is here seen, as these could be used to greater advantage and they would also be valuable for protection in wet seasons.—S. M. N.

FLAVOUR IN STRAWBERRIES.

READING "A. D.'s" comments (p. 68) on the above, I must confess I am somewhat surprised that such a practical and observant correspondent did not notice the close relationship of the three varieties he there mentions. He must have over-



A Japanese arrangement of flowers and foliage. (See p. 97.)

looked the fact that Messrs. J. Veitch and Sons obtained Prolific Strawberry by crossing one of my highest flavoured seedlings, viz., Empress of India, with British Queen, and that I obtained Empress of India, Lord Suffield, and Gunton Park by crossing British Queen with Countess, and *vice versa*. British Queen and Empress of India being both pale scarlet in colour, Messrs. J. Veitch and Sons' seedling Prolific must have bred back to its original parent Countess for its dark colour and to some extent for its flavour. To obtain Lady Suffield Strawberry I crossed the early variety Empress of India with the late variety Lord Suffield, this producing a midseason kind combining the richness of flavour of the Empress of India with the delicious sweetness of Lord Suffield. I maintain from a hybridiser's point of view Messrs. J. Veitch and Sons erred in re-crossing Empress of India with British Queen. Prolific thus becomes the progeny of its grandparent on the one side. A distinct step forward in

point of flavour had been gained by me in crossing British Queen and Countess, and the right thing to do was to take two of these high-flavoured seedlings, the one late and the other early, and re-cross them to gain another step forward to that goal of excellence in flavour at which I am aiming. I should like to point out and emphasise here what important results will spring from that lucky cross of British Queen and Countess. It is not fully realised yet.

It has already given us Empress of India, Lord Suffield, Gunton Park, followed by Veitch's Prolific and Lady Suffield. Still higher flavoured seedlings will follow of such exquisite flavour, that the next generation of Strawberry eaters will require neither sugar nor cream to tone down their acidity. I may add here that I grew Countess for years and much appreciated its quality and free-bearing, but it is so entirely superseded, in my opinion, by its superior flavoured progeny that I no longer grow it. "A. D." states that Lady Suffield had lost flavour in transit when exhibited at the Temple. As these Strawberries were grown in pots and had to be retarded a few days to keep them back for May 31, it may be so. "A. D." regards the rapid disappearance of the Prolific Strawberry as a test of great excellence when exhibited before the fruit committee. Granted. Then I will congratulate myself, as no Strawberry in the world ever disappeared more quickly than the two fine dishes of Lady Suffield exhibited at the conference at Chiswick. Not a Strawberry was left on the plates when the committee rose. Perhaps the tropical temperature of the large vinery induced this great need of refreshment, or may I conclude it was the excellence of the Strawberries?

WM. ALLAN.

Gunton Park.

ROTTENNESS IN FRUIT AND MUMMIFICATION IN PEACHES.

YOUNG and growing fruit as well as fruit bordering on maturity are often attacked by various microscopic fungi which stop their growth or cause the destruction of already formed tissues. One such destructive organism is the *Monilia fructigena*, a fungus which especially attacks Apples when these are ripe and causes brown or black rottenness. Circling round the little wound that gave passage to the mycelium, a spot is seen to spread, which from a light brown becomes gradually black. Later, in the affected part appear small ashen-coloured swellings like warts varying in size from a millet seed to that of a very small pea. These are always ranged in concentric circles round the wound. As the rottenness increases new circles appear one after the other to the number of three or four. The mycelium of the fungus pervades the fruit pulp and decomposes it. Beneath the skin the fungi increase rapidly in size and number and crowd upon each other in all directions. Under pressure of them the skin bursts, and from the cracks issue certain aerial projections or ramifications, which become fertile, and it is through them that the parasites are propagated. They are formed of filaments drawn out perpendicularly to the fruit and which are drawn in at intervals, resulting in the formation in a series of cone-shaped spores of a kind of chaplet, and hence the generic name of *Monilia*. These chaplets also are apt more or less to bifurcate in places, and in serried formation they compose the warty protuberances mentioned above. When ripe these spores are easily separated from each other, and, carried away by the wind or rain, they are apt to contaminate other fruit. Each when isolated is seen to be almost lemon shaped. If put in water they germinate with extreme rapidity and quickly ramify and constitute the destructive mycelium.

The *Monilia fructigena* is apt to cause decomposition and rottenness in large quanti-

ties of ripened fruit, and it also frequently attacks and completely arrests the growth of immature fruit, causing a kind of drying up known as mummification. The disease on young fruit has been especially noticeable in America. Peaches especially are affected, and the crop is sometimes entirely destroyed by the action of the *Monilia*. The fruits attacked begin to soften, and frequently cling more or less completely to the branch they are on, or where there are several in proximity cling to each other, mummification quickly follows, and nothing is left but the kernel and the skin. While the mummification is going on in the pulp the mycelium has attained complete development, and outside a large number of groups of spores have been formed identical with those mentioned above, and which cover the fruit almost entirely with a grey efflorescence. The mummified fruit remains attached to the tree during the summer and even the most of the winter. Towards the end of winter and in the spring the fruit falls to the ground. The mycelium which has kept alive vegetates anew and produces an abundance of new spores which may infect the budding fruit. But the fungus does not confine its attacks to the fruit; it may also invade the young shoots (of the Peach at least), which then rapidly wither and decay. The destruction it causes in this way is in America apparently as important as that which it occasions by directly attacking the fruit, because it injures also the vegetation, destroys the fruit crop of the following year, and may, moreover, favour the development of gum.

In France it has not so far made its presence felt to this grave extent, but still it should not be exclusively considered as a parasite of fruit already fully grown. Although it has already been observed upon young fruit, it does not appear to be considered as greatly harmful. This year I have been able to observe the rapid development and the ravages of the *Monilia* among Plums. In a few days almost the whole of the fruit of certain trees was attacked, and the crop thereby almost entirely destroyed. In Plums the disease shows itself when the time of ripening is at hand. The fruits attacked become of a livid colour on one side, then slightly soften and cling together. From a Plum so attacked the mycelium can then pass to one still sound and infect it also. In this way the disease rapidly spreads to a great number of Plums which were not infected by the spores. After softening, the fruit gradually withered, as with the Peach, and the spores of the fungus made their appearance on the outside, but generally much less abundantly than on the Peaches.

Among Peaches in the open also I was able to observe the havoc caused by the *Monilia*, all the fruits of a small tree planted in the open being mummified one after the other. But further—a thing which, I believe, had never been observed before in France—the extremities of the shoots were likewise attacked and a large number of young branches withered up under the influence of the parasite. Upon some branches were observable, protruding through the bark, small excrescences, which at first sight seemed to be identical with the groups of spores that appeared upon the fruit, but which were very small, and subsequent microscopic examination established this identity beyond doubt.

So far the disease has not been observed to be very dangerous, but there is fear that it might be otherwise at a given moment and that it is capable of acquiring importance, as in America. Moreover, it may well have been the

cause of injuries of which the real origin was ignored. Its peculiarities, therefore, are worth the attention of fruit growers, especially as some authors have been inexact in their information as regards it. The *Monilia* has in all probability another form of fructification analogous to that of another *Monilia*, which attacks the young Quince—the *Monilia Linhartiana*—the ultimate fructification of which is a small cup-shaped receptacle, of which the concave part is furnished with a large number of asci, each enclosing eight oval-shaped spores (*Stromatinia Linhartiana*). A form analogous to this ought certainly to exist for the *Monilia fructigena*, as in all its characteristics this fungus resembles the other, but this ascophorous form has not as yet been observed.

PRESERVATION OF THE TREES.

For the protection of fruit trees from this parasite a remedy both easy and general has not yet been found. Cupric sprayings are likely to have some influence, but these require to be frequently repeated in order to protect the lengthening shoots. In America it is thought advisable to collect and burn as fast as they are detected all fruit attacked by the fungus. This process must be repeated at intervals of several days in order not to leave the infected fruit time to give birth to spores or contaminate sound fruit by contact. But, however careful the search, a certain amount of the fruit may well escape by being more or less hidden by the leaves, so that it is necessary in winter when these have fallen to make a fresh search and destroy at the same time fruit still adhering to the branches, those which may have fallen to the ground, and all branches and shoots attacked by the fungus and more or less withered. These are certainly excellent precautions to take, and their application should prevent the spread of the disease. The gathering of the infected fruit is done at the cost of minute search and great expenditure of time. Unfortunately, there exists hardly another way of dealing efficaciously with the disease. Doubtless copious sprayings in winter have a good effect in destroying the spores which may exist upon the branches, but the spores produced in the spring by fallen fruit may easily infest the young fruit, which it is a difficult matter to protect, and the young shoots; hence the importance of destroying all the infected parts. Cupric sprayings during the time of vegetation may, nevertheless, be a protection. —PIERRE PASSY, in the *Journal of the Horticultural Society of France*.

Peaches in Russia.—My earliest Peach house contains three trees—Amsden, Hale's Early and one whose name I do not know. I begin forcing this house about December 25 and force it very slowly, so that the first fruits of Amsden ripen about June 1. The trees, which were planted some six or seven years ago in raised borders, are large and in good health. Amsden bears fruit annually abundantly, Hale's Early very badly. I often read in *THE GARDEN* that of the early American varieties Amsden is the best. I quite agree that it is prolific, that the fruits are of a nice size and look very promising, but it lacks quality. I think it so poor and flavourless, that I should feel ashamed to offer it to a friend. It is somewhat bitter, and if it hangs a little too long, it gets mealy and quite unfit for the table. If I had instead of three houses five or six, perhaps I should feel obliged to spare room for the Amsden for its earliness, or if the fruits were required for sale. But as this is not the case, I think the most radical way the best, viz., to throw it on the rubbish heap. Hale's Early is not prolific at all with me. The few fruits I get often have split stones. The general constitution of the tree is

very weak. It always loses a greater part of its leaves at the lower end of the shoots than any other variety. The quality is excellent, but considering all its other disadvantages I think it not worth growing. The third tree, the fruit of which, though very good in quality, is by far too late for the earliest house. So I think of clearing the house of its occupants and planting other young trees in other sorts. Following this time the advice given in *THE GARDEN* by Mr. Iggulden, I shall plant maiden trees. Will you kindly tell me the best sorts to plant instead of the above? I am not obliged to have ripe fruits very early in the season, but nevertheless I should be glad, as it is my earliest house, to be able to gather the first fruits not later than June 25 to July 1, forcing slowly and beginning about December 25. The kinds must be (1) of a vigorous and most prolific habit, (2) the fruits freestone, nice looking, large, and of excellent quality, and (3) early and ripening in succession. —R. K., *St. Petersburg*.

SPRAYING FRUIT TREES.

THE spraying of trees to kill and to prevent fungi and insect pests has long since passed an experimental stage, and is now looked on as part of regular orchard work by good fruit growers. From the necessity of making it pay, commercial fruit growers are more advanced in the matter than are private gardeners. Probably the first general use of poisons for the purpose was in the case of the Paris green for the destruction of the Potato bug. This poison was so useful for the purpose, that it awakened many to the value of such means of warfare who had previously paid but little attention to the subject. The use of powdered hellebore for the destruction of the Currant worm is another well-known instance of the value of poisons for such work. Paris green is still the standard remedy for the destruction of leaf-eating insects on fruit and other trees, kerosene emulsion for sucking ones, and Bordeaux mixture for all kinds of fungi. Paris green is made into a mixture for spraying by adding a pound of it to 200 gallons of water, with enough lime to equal the Paris green in bulk. Bordeaux mixture is made by mixing 6 lbs. copper sulphate (bluestone) with 75 gallons of water and 7 lbs. lime. Kerosene emulsion can be made by boiling half a pound hard soap in a gallon of water, and when boiling hot add 2 gallons kerosene. This is to be churned vigorously for ten or fifteen minutes, and then adding ten times as much water before using.

As a matter of fact, all fruit trees are the better for being sprayed, whether usually attacked by insects or not. It prevents blight and other pests; and besides this, experiments carried on by the United States Department of Agriculture some years ago proved that sprayed trees made a better growth than those not so treated, even when no insects or fungi attacked the latter. Later experiments prove that the two mixtures, Bordeaux and Paris green, may be combined and used as one; and it is now quite common to use them in this way. It is recommended to start spraying before the bursting of the leaves, giving another application as soon as flowering is over and two or three more at intervals of three weeks or so. After midsummer there is not much to be feared, and spraying may cease.

Insects and fungi injurious to Apples, Pears, Plums, Cherries, Peaches and like trees are destroyed by a system of spraying. Scale insects and those that suck the juices of trees are to be treated to a spraying of kerosene emulsion. This can be carried on in winter as well as summer, and when persisted in will in time rid the trees of their enemies. Fire blight and black knot cannot be controlled by spraying, though it is believed to act as a preventive. The usual and only plan recognised as efficacious is to cut off the diseased branches and burn them to destroy the fungus spores. As soon as fire blight appears cut off the branch some 9 inches below the dead part, and do the same with branches of Plum or Cherry attacked by black knot. The fungus which pro-

duces the disaster is supposed to be in the sap, hence outside spraying cannot reach it. It is not certain that outside agencies are not at work too, hence the suggestion to spray these trees as well as others.—JOSEPH MEEHAN, in *American Gardening*.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 67.)

BEURRÉ DUBUISSON.—This was raised about 1832 by M. Isidore Dubuisson, gardener of Jolain, near Tournay, Belgium. The fruit is of fair size, oblong, truncated at the base, rather ribbed at the base. The stalk is short, stout, straight, set rather obliquely in a small wrinkled cavity. The eye is small, closed, set in a cavity of medium depth, ribbed at the edges. The skin is yellow, much stippled with red, sometimes washed with red on the sunny side. The flesh is whitish, delicate, close, melting, unctuous, juicy, and pleasantly aromatic. A very good fruit, ripening in December—February. The tree is of moderate vigour and fairly fertile. In cultivation the growth is rather weak upon Quince.

BEURRÉ DUMONT.—Obtained in 1831 by M. J. Dumont-Duchy, gardener to the Baron de Joigny, at Esquelmes, near Tournay. The fruit is large, sometimes pyramidal and truncated at the base, sometimes turbinate. The stalk is short, stout, straight, set obliquely in a narrow bumpy cavity. The eye is medium, open or half open, set in a fairly wide wrinkled shallow cavity. The skin is rough, yellow, washed tawny, gilded on the sunny side with some deeper streaks and stippled grey. The flesh is white, delicate, luscious, juicy and delicately aromatic. A good fruit, ripening October—November. The tree is of normal vigour and fertile. In cultivation this variety, suitable for all forms on Quince, is better in regard to length of life and vigour for an intermediary graft.

BEURRÉ DU MORTIER (*syns.*, *Verte du Mortier*, *Beurré Dumontier*, *Fondante de Tirlemont*).—Obtained in 1818 by Van Mons and named after B. C. du Mortier, a naturalist, of Tournay, Belgium. The fruit is small or medium-sized, turbinate obtuse, taking the shape of Bon Chrétien, bumpy in its contour. The stalk is of medium strength and length, curved, set obliquely in a narrow, wrinkled cavity. The eye is large, open, set in a shallow, wide cavity, wrinkled. The skin is rough, yellow-green, much stippled with grey, streaked with tawny red. The flesh is whitish yellow, fairly delicate, luscious, juicy. A very good fruit, ripening September and October. The tree is of normal vigour and fertile. In cultivation this variety is adapted to small forms upon the Quince; it is a good thing to double-graft it in order to get strong shoots.

BEURRÉ DURONDEAU (*syn.*, *de Tongre*).—Obtained in 1811 by M. Charles Louis Durondeau, a brewer, of Tongre Notre Dame, near Tournay. The fruit is fair sized, pyriform. The stalk is short and stout, set obliquely on the fruit or slightly pushed aside by a small mound. The eye is medium-sized, closed or half closed, set in a shallow, wide, and irregular depression. The skin is smooth, thick, tawny, tinged very slightly with red on the sunny side and stippled all over with small grey points. The flesh is whitish, juicy, and aromatic. A good fruit, ripening in October. The tree is of medium vigour and fertile. In cultivation it is of sufficient vigour upon Quince. This variety lends itself to all forms.

BEURRÉ GAMBIER (*syn.*, *Beurré d'hiver Nouveau*).—Obtained by M. Gambier, of Rhodes Saintes-Genève, near Brussels. The fruit is medium-sized, pyriform; the stalk sometimes long and not very stout, sometimes of middling dimensions, swollen at the point of attachment, set straight in a cavity neither wide nor deep. The eye is medium-sized, half closed, inserted in a depression scarcely marked. The skin is delicate, citron-yellow, stippled russet, slightly streaked with tawny red, and at times washed with red on the sunny side. The flesh is whitish,

delicate, and aromatic in the way of Doyenné Blanc. A good fruit, ripening March—April. In cultivation this variety, too feeble upon Quince, requires to be grafted on the natural stock or double-grafted on a vigorous variety, yet can only form trees of small size. It should be cultivated in a warm exposure and gathered late, otherwise the fruit never attains full maturity.

BEURRÉ GIFFARD.—Originated as a chance seedling with M. Giffard, of Angers, and propagated by him. The fruit is of medium size, pyriform; the stalk of medium length and stoutness, slightly curved, set straight at the top of the fruit. The eye is medium-sized, open, set almost flush with the fruit in a shallow, wrinkled depression. The skin is smooth, delicate, pale yellow, stippled grey, often washed with tawny red round the stalk. The flesh is white and agreeably aromatic. A good fruit, ripening July. The tree is of medium vigour and fertile. In cultivation this variety does not lend itself to regular forms. It is suitable for orchard culture.

BEURRÉ GRIS (*syns.*, *Beurré d'Amboise*, *Beurré Doré*, *Beurré Roux*, and *Beurré d'Isambart*).—Of very ancient and unknown origin. The fruit is medium sized or fairly large, almost as wide as high. The stalk is of middling length, fairly stout, sometimes fleshy at the base, swelling at the point of attachment, set obliquely at the summit of the fruit. The eye is medium sized, open, set in a shallow, wide depression sometimes flush with the fruit. The skin is delicate, pale green or yellow, almost entirely washed with tawny red and stippled grey, rarely tinged with a little rose colour. The flesh is white, very juicy. A very good fruit, ripening October. The tree is of medium vigour and fertile. In cultivation the tree, delicate upon the Quince, ought always to be double grafted. It ought nearly everywhere to be trained as an espalier in order to yield sound fruit.

BEURRÉ HARDY.—This variety was raised from seed by M. Bonnet, of Boulogne-sur-Mer; it was propagated by M. Jean Laurent Jamin. The fruit is of medium or fair size, turbinate. The stalk is of middling length, stout, swollen at the point of attachment, and set obliquely in a small cavity. The eye is fairly large, open, set in a wide, shallow, wrinkled depression. The skin is rough, greenish yellow, washed with tawny red, stippled brown. The flesh is white, luscious, rather gritty about the cells. A very good fruit, ripening September to October. The tree is of medium vigour and fairly fertile. In cultivation this variety comes well on the Quince and is suitable for all forms.

BEURRÉ MILLET.—Originally obtained in 1847 in the garden of the Commice Horticole of Maine-et-Loire, and named after the president of that establishment. The fruit is small or barely medium sized, slightly bumpy in its contour. The stalk is of middling length and stoutness, rather swollen at the point of attachment, curved and set straight in a small bumpy cavity. The eye is large, open, set in a wide, deep cavity. The skin is rather rough, greenish yellow, washed with dull red, streaked carmine, stippled tawny red. The flesh is greenish white, melting, and very pleasantly aromatic. A very good fruit, ripening December—February. The tree is vigorous and very fertile. In cultivation this variety grows badly on the Quince. It should preferably be grafted on the Pear to get trees of medium size without retarding the yield.

BEURRÉ RANCE (*syns.*, *Bon Chrétien de Rance* or *de Rans*, *Beurré de Flandre*, *Beurré de Noirechain*, *Hardenpont de Printemps*).—Obtained originally in 1762 by the Abbé Nicolas d'Hardenpont at Mont Panisel, near Mons, in Belgium. The fruit is of good size, of Bon Chrétien shape. The stalk is fairly long, of medium stoutness, rather swollen at the point of attachment, set obliquely in a narrow cavity. The eye is small or medium-sized, half open, set in a shallow and fairly wide cavity. The skin is roughish, thick, green, slightly tinged brown on the sunny side, stippled grey and streaked sometimes with tawny red. The flesh is white at the centre, greenish

in the outside, sometimes half delicate and half melting, sometimes delicate and luscious, very juicy, and with a peculiar aroma. The fruit is fairly good, ripening January to March. The tree is vigorous and fertile. In cultivation the tree grows vigorously both on Quince and on the natural stock; it lends itself to all regular forms. The fruit is much better if the tree is grafted upon the Quince, and the Belgians say that on the natural stock it is uneatable.

BEURRÉ SIX.—Obtained originally about 1845 by M. Six. The fruit is fair sized, pyriform, and ribbed in contour. The stalk is of middling stoutness, sometimes long and slender, curved, set well at the summit of the fruit. The eye is fairly large, closed, set in a very shallow, wrinkled cavity. The skin is light yellow, finely stippled with russet, mottled with green. The flesh is white, tinged green, especially close to the skin, luscious, and pleasantly aromatic. A good fruit, ripening October, November, and December. The tree is of moderate vigour and fertile. In cultivation the tree prefers the natural stock to the Quince; it is best double-grafted. In certain soils and climates it does best as an espalier.

BEURRÉ SUPERFIN.—Obtained originally in 1844 by M. Goubault, nurseryman, of Millepieds, near Angers. The fruit is of good size, as wide as high. The stalk is shortish, very stout, and fleshy. The eye is large, open, set in a very shallow and wide depression. The skin is smooth, golden-yellow, very slightly washed carmine on the sunny side, stippled with russet, dotted over with some tawny red. The flesh is white, luscious, and delicately aromatic. A very good fruit, ripening September. The tree is vigorous and fertile. In cultivation, grafted on the natural stock the tree is long before fruiting; on the Quince it becomes quickly exhausted. It is best double-grafted. It lends itself to all forms.

BLANCHET CLAUDE.—Obtained originally by M. Claude Blanchet, nurseryman, of Vienne (Isère). The fruit is barely medium-sized. The stalk is long and stout, swollen at the point of attachment, set rather obliquely in a small, lightly-ribbed cavity. The eye is medium-sized, open or half-open, set in a medium and wrinkled depression. The skin is smooth, rather unctuous, tender green, washed yellow, stippled green and tawny red. The flesh is whitish, greenish beneath the skin, gritty near the cells. A fairly good or good fruit, ripening in the middle of June. The tree is vigorous and fertile. In cultivation the tree lends itself to all forms, requires a warm exposure to hasten the ripening of the fruit, the earliness of which is its principal merit.

BON CHRÉTIEN D'HIVER (*syns.*, *Bon Chrétien*, *Bon Chrétien de Tours*, *Poire d'Angoise*, *Poire de Saint Martin*, &c.).—A very old variety of unknown origin. The fruit is large, rather calabash in form. The stalk is long, slender, curving, set sometimes straight, sometimes obliquely in a rough cavity. The eye is small, open, set in a deep, wide cavity very lumpy at the edges. The skin is almost smooth, greenish citron-yellow, marked with russet, mottled green and tawny in places. The flesh is white, juicy, and slightly aromatic. A very good cooking and a fair dessert fruit, ripening February—April. The tree is of normal vigour and fertile. In cultivation this variety does not lend itself to regular forms unless trained. Its true place is a south espalier. It is esteemed in warm districts, where it is said to acquire quality.

(To be continued.)

Worn-out fruit trees.—Too much has been made of the good effects of pruning old trees, and nine-tenths of the rubbishy old orchards up and down the country should be cut down, the trees burnt, and the land cleared for some other purpose for a year or two. The poor old trees have been neglected entirely for so many years, that their vigour is gone and only a lingering life remains. Still further check this by cutting faggots out of them, and they are done for in most cases. No matter how carefully the work

s gone about, there comes a time when it is absolutely useless to think of repairing the damage that time and neglect have wrought, and it is best to accept the inevitable and cut them down. A new orchard may, of course, be planted on the same site if really necessary, provided the land is properly prepared, but it is not to be recommended as a rule. One such was replanted by a nurseryman in Gloucestershire and is now a fruitful orchard, but in this case the whole of the old trees and the top 3 inches of soil were burnt, thus doing away with all insect and fungoid life. The ash was kept in heaps and mixed with the top spit when the land was trenched, manure from the scavenger's yard being plentifully incorporated with the lower soil. There is yet plenty of time for preparation of the soil for planting this season, and I would like to urge on those who have these worthless old trees, that the sooner they root them out and plant the young ones the better. Not only is the produce of better quality and more of it, but early Apples of the Codlin types come into use from young trees much earlier than from old ones.

Stone-splitting in Peaches and Nectarines.—One is often asked what causes the stones of these fruits to split, but I think, like many other troubles, it arises either from a poor state of health of the trees or from some error of culture. In forced trees there is little doubt it is often caused by running the temperature up too high, and again, young trees that are not properly established or older ones that have run through the proper border to a bad soil beneath are given to it. There must be a cause undoubtedly, but it is not the same in every case, and those who have been looking after the trees and observing them should be the most likely to know where the culture has gone wrong. There is now time to note any trees that have given trouble in this respect in the past or present seasons and mark them for examination of the roots towards the autumn. If got about early, there need not be any fear of doing them the least harm, and often the secret may be found. There may be a badly-drained part of the border itself or a few strong roots may have got through it entirely, and in either case corrective measures can be carried out. Just as the leaf is turning before it falls is the best time to disturb the roots.—H.

WATERING VINE BORDERS.

It seems to be the opinion of some that Vine borders can scarcely be watered too often or too much, but such an idea is, I believe, erroneous. We sometimes see watering every ten days or so advised, and certainly in the case of extra shallow borders and where the compost is light and sandy, such frequency may be necessary. In well-made borders of ordinary depth I have found a good moistening before the Vines are started, another when the bunches are coming into bloom, a third when the berries have been thinned, with a fourth and fifth when taking their second swelling and commencing to colour to be sufficient. I am afraid many of the so-called waterings are only surface moistenings: whereas they should be thorough soakings from summit to base. Where the borders are shallow, mulching is often neglected. A thick layer of manure is not necessary; nothing answers better than a couple of inches of spent Mushroom manure. This prevents undue evaporation. Some gardeners never seem easy unless constantly soaking their Vine borders, even in autumn and winter. It matters not whether the border is inside or outside, or whether of a sandy or clayey nature; it is all the same to them. I have known copious supplies of manure water poured on to outside borders during winter which if followed by severe frost cannot but prove injurious. The reason why so many outside Vine borders are destitute of roots within a foot or so of the surface is that saturation from heavy rains or deep snow at that period, followed by frost, destroys the delicate fibres. If anyone doubts this, let him examine a

border that has been regularly covered with leaves in autumn. If the Vines are healthy he will find surface roots numerous, because they have been preserved from the perishing effects of wet and frost. Excessive watering washes the nature from Vine borders. I have heard of gardeners using shutters on their Vine borders in winter with a view to throwing off excessive rains and snow, and I think the plan worthy of imitation. A wet autumn is deemed prejudicial to the proper ripening of hardy fruit trees, and that because it influences the roots as well as the branches, and the same remark applies to Vines. A gradual diminution of root as well as atmospheric moisture is necessary in order to



A Japanese arrangement of Irises. (See p. 97.)

secure perfect maturity and rest for the Vine. For Vines in active growth I think nothing equals liquid manure. B. S. N.

Gooseberry Rough Yellow.—Your correspondent (p. 35) does not seem to be aware that this is probably but another and an older name for the Early Sulphur or Golden Ball. The Yellow Amber or Hairy, also well named Yellow Champagne and Yellowsmith, is much of the same character and equally good. All growers will agree that it is worthy of the best possible culture to bring it to the highest perfection. The jam or jelly of the Yellow Sulphur or Rough Yellow has with good cause been named golden honey.—D. T. F.

Apple Mr. Gladstone.—Where Apples are required for dessert very early in the season this is a useful variety, for though the quality is not quite up to the mark, its earliness is undoubted. Judging at a local show recently, I was compelled to give this first place against a dish of Juneating, which was quite unripe, though doubtless in another ten days it would have been much the better dish as regards flavour. Mr. Gladstone is too mealy and soft to ever come much into favour, and its earliness is its best point, though

I am far from thinking that Apples are really needed in July, considering what a lot of really good fruit is to be had at this season.—GROWER.

Air for Vine borders.—No doubt many have been interested in the article by Mr. Riddell on air for Vine borders. I think the practice of supplying air to borders by means of underground tunnels was more common fifty years ago than it is now. Raised borders, as recommended by Mr. Riddell, were also more common. I have several times written in support of elevated borders both for vineries and Peach houses, especially for early forcing. I well remember an old vinery in Essex containing Black Hamburgs which were very successfully forced so as to be ripe at the end of May for twenty-five years. The border was outside the house and raised considerably. At the top near to the front light, and also at the bottom close to the Box edging, were air shafts formed of brickwork communicating with the drainage. The supply of air could be increased or diminished at will simply by means of a lid on the top. The interior of the house was constantly supplied with fresh air through the front wall, the air being made to pass over the hot-water pipes before rising into the house. The border was always covered to a depth of 2 feet with dry leaves in October, these being thatched with reeds. Better early forced Hamburgs I have seldom seen.—NORWICH.

GARDEN FLORA.

PLATE 1234.

NOTES ON TULIPS.

(WITH A COLOURED PLATE OF *T. SAXATILIS*.)

THERE is no period of greater importance to the Tulip family than that of the resting period. That period is now well advanced, and those who appreciate their Tulips will not let it pass unheeded. That it concerns the bedding kinds so-called as much as any other section or group, and not unnaturally the many varying and beautiful species of which this valuable genus is composed, is well known to all who have given any thought to the cultivation of the bulbs in question. It may be said that there are known instances of old cottage garden Tulips that have remained in the soil year after year without being lifted, and with but the rest secured to the bulbs by the heat of the summer, and which have flowered freely afterwards. Yet the bulbs that do well under such treatment would without doubt have done infinitely better had the roots been lifted in early summer, and having been carefully dried, cleaned and sorted, replanted in due course in a fresh position and soil. This fact is too well known to large growers of such things. An excellent illustration of the value of resting the bulbs is afforded now and again by the progress under cultivation of some newly-imported species. Frequently, indeed generally, the bulbs by long contact with the soil become very small, and on their first flowering do not impress either the beholder or support the glowing accounts of their beauty or worth that may have gone forth. Much of this, however, is quickly changed under the conditions of culture accorded the bulbs by most European growers, and frequently an offset will be larger in the third year after introduction than was the original bulb when first introduced. Nor is this the result exactly of a forced growth, such indeed as one may expect from land heavily manured or the like, but rather an

* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



TULIPA PANATII

illustration of the general conditions of growth in lowland gardens as compared with those of the higher altitudes at which numbers of these beautiful flowers are found. Doubtless not only a more deeply cultivated soil, but the moist climatic conditions which alone ensure a longer season of growth in the lowlands will in a considerable degree account for this development both of bulb and of stature. In the replanting of such things as Tulips it is always better to make at least two sizes, planting the large flowering roots in one lot and the small or successional bulbs more thickly in a reserve plot. So long as the soil is new to these things they are not particular as to its component parts, seeing they do so well in such variable material as vegetable and peat earth or sandy loam, or even the lighter clay soils. As a rule, however, the more vigorous types will be safe enough in stronger soils, while in the case of a few exceptional sorts, particularly those dwarfier and more dainty in growth, a free sandy soil may be given.

Planting may be done during the early autumn. Meanwhile keep the bulbs in some free, airy place such as a well-ventilated shed or outhouse. It may be worth noting how beautiful are the many dwarf species when grown in groups in the rock garden. Here, small groups or colonies may be planted that at flowering time will create some very pretty effects, the dwarfier sorts being perhaps best suited to this purpose.

The pretty species in the coloured plate to-day, *T. saxatilis*, is among the choicest of the dwarfier sorts, rarely, if ever, attaining a foot in height. The dainty character of the plant is so well shown in the plate, that it would be superfluous to add anything in this respect. It may be remarked, however, that the larger flower is rather highly coloured for this kind, while the expanding blossom gives a good idea of the way the flower is lined externally. The species is a native of Crete and among the earlier sorts to flower. Some good companions for this charming sort may be found in *T. violacea*, a unique species, very dwarf, and probably the earliest known species to flower; the exquisite *T. Leichtlini*, a delightful plant from any point of view; *T. Batalini*, lovely in the soft yellow tone of its flowers; *T. persica*, a dwarf and fragrant kind, beautifully adapted for massing or rockwork; the cream-coloured *T. biflora*, which is also a profuse bloomer and quite early; *T. Clusiana*, which is white with red stripes and conspicuous with violet eye; and the pretty Grecian *T. orphanidea*, the last having orange-yellow flowers and a dark centre. Masses of any of these would be most interesting, and from their earliness as much as dwarfness are well suited for this style of gardening.

E. J.

THE WEEK'S WORK.

KITCHEN GARDEN.

OPEN-AIR TOMATOES.—Plants, whether occupying warm, sunny walls or grown market fashion in open positions trained to stakes, will now demand close attention. The soil at the base of walls is frequently drier than the cultivator is aware of, and, through the roots suffering, the bloom-trusses fail to set, the weather being blamed for it. Mulching, though generally indispensable, is often somewhat deceptive, as the surface appears moist when 6 inches down the soil is dry. Practically speaking, one can hardly over-water wall Tomatoes, although, of course, much de-

gives a check to the plants generally. The same remarks as to mulching, watering, and applying stimulants as in the case of plants on walls hold good. Mulching may in some soils easily be carried to excess.

CARDOONS.—The earliest transplanted rows of these will now be sufficiently advanced in growth to assimilate liberal supplies of water of a manurial nature. This is the only way to secure sturdy plants, Cardoons being such thirsty subjects. On light, porous soils if artificial watering is neglected in comparatively dry seasons failure is certain. Go over the plants and remove any suckers that may have issued from the base of the plants, also any rough, discoloured leaves, giving a copious drenching with farmyard manure once a fortnight, or where this is not practicable prick over the surface of the soil with a fork and apply a moderate sprinkling of guano, fish manure, or nitrate of soda. The last manure must be used with discretion, as if applied too liberally harm may be apprehended.

CUCUMBERS FOR AUTUMN.—In some gardens where Cucumbers are in constant demand and sufficient glass accommodation exists, it is customary to raise a batch of plants for producing fruit at the latter end of September and onwards. These plants will now be in small pots and in a growing condition. A moist, shady house is essential for the production of vigorous, spider-free plants, which after filling a 6-inch pot with roots will be ready for transferring to their permanent positions early in September. With care in management there will then be no fear of a scarcity of tender, well-flavoured fruit from the time the summer frame and pit supply is exhausted until the winter plants commence to yield. Upon no consideration allow a pot-bound condition to occur, as then an attack of red spider may be expected. I do not advise a too rich compost for autumn-bearing plants which may, perhaps, have to supply fruit throughout November, as a solid, wiry growth rather than a soft, over-sappy one is desirable. I think good sound loam, kept open with a little leaf-mould and some road grit, is a very suitable compost, as it is easy to feed to any extent when the plants commence to carry fruit. A quiet corner in a rather close, moist house is the best position for the plants at present, and they enjoy the moisture arising from a layer of damp Moss. People nowadays, as a rule, prefer large, showy Cucumbers, but, provided a true strain is secured, I do not think there is a more reliable or profitable variety for late autumn or winter use than the old Syon House. Next to it, a good variety of Telegraph is, perhaps, best.

SPRING-FRUITING TOMATOES.—From the commencement to the middle of August is a suitable time to sow, in as cool a place as possible, seed of some hardy, free-bearing sort, or sorts, of Tomato for furnishing fruit say in April, 1900. Hardiness and non-liability to fungus attack during the dark, dull days of winter being the aim of the cultivator, a cool position from the very first is imperative. A frame turned towards the north and kept moist daily will answer well, airing according to the weather. I think the plan of sowing in small pots and potting on as soon as these are well filled with roots as good as any. Good calcareous loam and road grit, or old mortar rubble, form a good rooting medium. When growing freely, the young plants must have free exposure to sun and air, and in favourable weather the lights must be drawn clean off. Stockiness is the great thing, and in October, before frost sets in, remove the plants to a cool, airy house close to the roof glass, where they will remain till potting time arrives.

J. C.

FRUITS UNDER GLASS.

PEACH HOUSES.—Should any replanting of trees or renovation of soil be requisite in the early Peach house, they should be taken in hand at once before the trees lose their leaves, then the roots will become active again immediately and scarcely any check will be felt by the trees. In dealing



Iris in a Japanese bowl. (See p. 97.)

depends on the season. Administering or withholding stimulants must be regulated entirely by the growth the plants are making or the crop they are carrying. I have found nothing better for Tomatoes than farmyard liquid obtained in a fresh condition and diluted to about one-third of its strength. Beware of the still too common practice of wholesale defoliation, nothing tending more to check the plants and reduce both size and quality of the fruit. Keep all side laterals closely pinched out, and in the case of any clusters of fruit being unduly shaded, shorten a few leaves to half their length, or even tie them on one side to admit sun and air. Plants trained on stakes must not be neglected for a moment in the matter of removing side growths, as frequently, if the weather is dull and hazy, a sufficiently free circulation of air is not enjoyed and mildew and other evils result. Pinch the leaders immediately they reach the top of the stakes, as allowing growth to fall downwards excludes air and light from the fruit, and the final removal of a foot or 15 inches

with such trees I have found it advisable to shade the house for the time being, and if the roots have to be kept out of the soil for any length of time they should be kept plump by covering them with damp mats or something equivalent to the latter for the retention of moisture. If the trees are not old and actual replanting is contemplated, I see no need whatever to attempt lifting them with a large ball of soil, for, provided the work is done quickly and well and the roots surrounded with the kind of soil which conduces to activity in the shortest possible period, the preservation of much old soil round the roots is more of a hindrance than a help, besides adding to the danger of fracturing many of the roots by its weight when lifted. Few trees take so kindly to transplanting as does the Peach if given anything like fair treatment and provided it is not old enough to have lost all its recuperative vigour; therefore if the growth or the crop has been in any way unsatisfactory, I strongly advise an overhauling of the roots and re-making the border as the best means of correcting faults of this nature. As re-making does not necessarily mean giving the trees an entirely new border, the expense need not be great. Provided the old soil is not sour, most of it may be retained and will do good service when corrective materials are added to it. When Peach trees which are treated correctly as regards general management go out of health from any cause except that of old age, it is tolerably certain that the fault arises from a deficiency of lime in the soil, and it is to lime that the grower must turn for help in renovation. Many borders which contain a fair amount of mortar rubbish—an excellent ingredient for keeping a border porous—are still deficient in lime, for that in the mortar will have lost all or almost all its virtues, and freshly slaked lime should be added freely to the heap of soil being prepared for the planting. The only other ingredient for which I care is the ashes from the garden smother fire, which will consist of about equal proportions of wood ashes and burnt earth. These two ingredients and some good sound loam provide all the necessary elements to the border, and any feeding which may be necessary later on can then be applied to the surface or in solution when watering. The only case in which I recommend anything further to be added is when the border is wholly inside and very limited in extent, then a liberal allowance of half-inch bones will be of service. In dealing with fruit borders of any description too much care can hardly be spent on the drainage, as this to be effective must be ample and well arranged so that it is capable of carrying off within a reasonable time the large quantities of water that should be given during the time when the fruits are swelling fast. The most unsatisfactory borders are those which remain so wet below after watering as to preclude the possibility of giving the thorough waterings essential at frequent intervals during that period. These borders often crack on the surface and allow the upper roots to become dry while the lower ones are still wet from the previous watering; consequently the border has to have mere dribbles of water just to keep the surface right. On top of the drainage should be placed fibrous turves, which should be made to fit together nicely, and not be broken up by being wheeled upon or trodden heavily. Such a covering over the drainage will remain intact for years and will prevent the fine particles from silting down and choking the drainage. In planting, take care to make the border firm and to set the tree so that its stem will be buried no deeper than it had been previously; then spread out the roots in a natural manner, keeping them well up, and fill in round them with some nice mellow turf from an old stack if possible, keeping the newer soil for the body of the border. After planting, keep the house close, but cool for a few days, leave the shading on, and syringe freely two or three times a day, then the wood will remain plump and hardly any check will be felt. As the mid-season Peach trees are stripped of their fruits, use plenty of water to cleanse the foliage, and leave full air

on night and day, also see that the roots are not allowed to get dry. Late crops must be fed as occasion offers, so that they may attain a good size, and they should be kept well exposed to the light to gain all the colour they can, for with many of the very late varieties appearance goes for much.

PINES.—Though the weather may remain hot by day, we have now got to a time of the year when cool nights may be expected occasionally, so that there should be no laxity as to the heating arrangements, a brisk night and day temperature being necessary to keep the plants going, especially those carrying fruits that are in the swelling stages. These, too, will take water freely, and should be looked over frequently so that none among them will be allowed to get over-dry. Manure-water, preferably that made by steeping good guano and used in a weak form, will be taken freely by all the growing stock that has practically filled the pots with roots and will do the plants a great deal of good, whether they be fruiters or successions. All surplus suckers should be wrung out as they become big enough to be easily got at, retaining not more than one, and that one of the lowest on each plant for stock. Continue to pot up suckers when they become big enough, giving them small pots only in which to start and pot on earlier batches that have filled their pots with roots, so that they may become well established in their new pots before winter. See that the houses and pits are shut up early enough to run up the temperature 15° to 20° by sun-heat, and to counteract the scalding effects of the sun use the syringe freely, especially as regards the walls, linings, &c., to promote abundance of evaporated moisture.

MELONS.—Whatever license may be allowed to early crops, it is certain that one cannot afford to permit any laxity with regard to the latest plants at any time either in the matter of planting or in the general details of management, for it is these late batches that are most likely to become cankered when the weather begins to change for the worse and the nights get long. Perhaps pots are better than beds in which to grow late Melons, but either will do very well, and certainly plants in pots give most trouble in the long run. The beds or hillocks on which to plant should contain less soil than former lots have been given; they should be well raised, made firm, and the plants set out in the soil, which must previously have been well warmed. After planting, ventilate with care and close very early, syringing the plants freely at closing time and keeping up a high night temperature, so that both root and top grow rapidly. If pots are used, they should be so fixed that they cannot sink out of position, a firm pedestal being best for them. When plunged loosely in fermenting material the plants are apt to become strained through its settlement, and this is sure to injure them badly. CORNUBIAN.

KITCHEN GARDEN.

VEGETABLES AND DROUGHT.

This is a very familiar theme just now with everyone who has the charge of a garden and from whom is expected a daily vegetable supply of greater or less variety and bulk. The season has not so far been remarkable for the length of drought as much as for the great damage done in such a short time. For the six months—January to June—there have been in this neighbourhood 6½ inches more rain than in the corresponding six months of last year, and yet there is a much more widespread outcry from the influence of drought on vegetable and fruit crops. Peas and Cauliflowers among vegetables have given the most trouble with me, although others have suffered proportionately. The soil overlying a sandy clay subsoil drains rapidly in summer, and without mulching Peas suffer quickly. Several of the early sowings, which

were made at intervals of ten or fourteen days, seemed to come in all together, although kinds of a successional character were chosen. The evil of this was too clearly manifested in a short supply between these and the maincrop sowings, and at a time when the demand is heavy. The drought, too, showed very clearly the value of trenching the ground for Peas, especially that which has to do duty for them at rather short intervals. No vegetable so soon tires of the same soil as Peas when there is a frequent repetition of sowing, and which must necessarily occur in small gardens in dividing the warm borders between the early and most valued crops. In such cases trenching is invaluable, because it breaks up and incorporates some new and unexhausted soil with the old. Clayey subsoils ought not, of course, to be treated on the same principle as those of a lighter nature. I have known instances where the bringing up of a quantity of clay to the surface has completely spoiled the ground for vegetables, and until re-trenching had been carried out no useful crop could be produced. Straw manure dug into heavy ground is good, but that which is short and decayed is better for light soil. Mulching, as Mr. Wythes remarks, does not add to the appearance of the vegetable quarters, nor does it simplify the work in keeping down weeds. In open soils the hoe can be kept constantly moving among growing crops and the weeds kept well under hand, but this does not take the place of mulching.

In sowing late crops of Peas when the weather is summer-like I am compelled to cover the soil with straw litter as soon as the seeds are put in and allow these to push their heads through it. Needless to say, this must not be very heavy, or they would fail in their effort by being suffocated. Latterly, Spinach has given much trouble, some in running early to seed, other and later sowings absolutely refusing to grow. Spinach Beet comes to the rescue, however, and the weather which dealt so severely with the ordinary varieties seemed quite what the other enjoyed. Planting of winter crops was at a standstill for some time, resulting in over-grown and succulent plants in the seed bed and a large percentage blind and useless. Slugs in dry weather are less troublesome among tender salads and young vegetable plants, but the Turnip flea has been more than usually active. In the fruit garden birds have been most daring and destructive. Onions, which are usually good dry-weather plants, showed signs of distress previous to the rain of the 22nd ult. A heavy thunderstorm on that date, when 1¼ inches of rain fell, greatly assisted the swelling of these and stimulated other vegetables into active growth. Early-planted Brussels Sprouts and Runner Beans have made good growth. The break-up of the drought, however, will, it is hoped, soon change the aspect of affairs. W. S.

Wills.

The early Potato crop.—In many districts early and second-early Potatoes have this season had an indifferent time of it, as during the latter half of April and throughout May cold, particularly at night, gave the haulm a severe check. In some districts in the eastern counties the first growth was cut clean back when a few inches high, and all practical gardeners know well what that means so far as the size of tubers is concerned, as the majority of sorts never make up the lost vitality. These late, unexpected frosts ought to teach the necessity of protection, if only of a rough nature, such as loose, dry Bracken or litter. Owing to a lack of rain in this district first and second-early varieties will on most soils

be undersized, and an old gardener told me a few days ago that in the event of a copious rain the probability is that the tubers will grow out. I have not at present heard any complaint as to the disease. This confirms the opinion I have before expressed that the germs of disease may exist, but that they will not develop unless surrounding circumstances are favourable to it. I hope that the rain which fell almost without intermission in this part of East Anglia from 4 a.m. on Saturday until the same time on Monday has come just in the nick of time to save the late field plots on light land. Probably the price at which seed tubers are offered makes it impossible for growers to plant Renown in quantity for market, but I look upon this variety as one of the most useful late-keeping rounds introduced for many years. It is a grand cropper, almost as round as a cricket ball, delicious when cooked, and withstands disease better than many.—NORWICH.

AUTUMN AND WINTER SPINACH.

As regards the dates for sowing late autumn and winter Spinach, much depends upon the locality and the soil. Indeed, the soil in my opinion is the chief cause of failure in many cases, as I have often observed that land that produces a quick, soft growth is not the best for wintering the plant. In all gardens Spinach is not considered a necessity, but it is certainly a valuable addition, and where it does well there will be supplies from October to May. I find for autumn and winter supplies the best results are obtained from the large-leaved kinds, not but that these fail quite as badly as the older prickly and small round-leaved kinds if not given ample room. I am inclined to attribute some of the failures to undue crowding at the start. I fail to see why so many vegetable crops are sown so thickly at the present day, as in nine cases out of ten it is not necessary. By sowing thinly much better results would often follow. In the sowing of winter Spinach I find crowded plants in a rich, close, old garden soil grow so rapidly at the start that failure is nearly certain at a time the plant gets pinched in severe weather and is too weak to bear the strain. For years I sowed on rich or well-manured land specially prepared for the crop. It is necessary to manure in poor land, but I have obtained far better results from less manure at the season of sowing, giving more food in the shape of top-dressings when new growth is needed early in the spring. I also find a light, loose root-run not conducive to sturdy growth. It certainly is advantageous for seed sown say in March or April, but in August and September I find by reversing the conditions of culture a better crop is secured. Having a very light soil resting on gravel, growth is rapid, but not reliable, and to get a better return I sow on land well trodden; in fact, rolled both before and after sowing. One may often see large breadths of winter Spinach in fields when there are none in gardens. With field culture the plant gets what is almost impossible in a garden, that is, change of soil, and this is important. As regards dressing the soil, I would much rather give a good quantity of such aids as soot, lime, and burnt refuse of any kind than heavy coatings of manure. In heavy clay soil I have used road scrapings to advantage, and in a light porous soil cow manure is better than horse manure, and if any heavy materials can be added, so much the better. I am not in favour of sowing in newly-dug land just manured if the soil is very light. Several seasons when short of manure I used fertilisers, and had a much better crop. Lack of moisture is often the cause of failure with Spinach at other seasons, but too much in autumn and winter

soon tells its tale. I think it is of great importance to give plenty of room—18 inches to 2 feet apart in the rows, the plants being thinned to at least 6 inches to 9 inches in the row.

A hard and fast line cannot be drawn as regards date of sowing, as so much depends upon the soil and position. About the middle of August is a safe time, provided ample room is given and early attention paid to thinning. I get better results by making two sowings—one early in August, one a month later. Should the earlier-sown get coarse, the later will be a better crop and not run so quickly in the spring. The late-sown lot will often escape a severe winter when the other is much cut up. The later sowing need not be given so much space. The newer kinds of Spinach are excellent for winter and spring supplies, and a kind much grown abroad—the Viroflay—is very useful, on account of the colour and quality of its large leafage. The Long Standing, the Carter, and the Large-leaved Victoria are all good. In heavy land it may be advisable to sow the Perpetual or Beet Spinach. This lacks the quality of the others named, being more like a Beet-root, but it is a good substitute.

G. WYTHES.

ROOM IN THE KITCHEN GARDEN.

It is very short-sighted policy on the part of those who have the laying out of country places to allow so little room for the culture of good vegetables. The number of things that have to be grown to satisfy the kitchen department and the amount of space necessary to get proper quality in the produce can only be understood by those who have to do it with very limited space at disposal. Close planting is one of the worst evils, leading to want of quality and allowing insects a much better chance than when the rows of various crops can be kept well apart, so that air and light filter freely through them. Closely-planted gardens are and must always be a splendid propagating ground for Potato disease, mildew and other fungoid troubles, and, of course, more seed is used, good rows well apart of almost every crop producing twice the amount that crowded ones do. Again, it is impossible to give the various crops their proper rotation, and land has often to be sown or planted before it is really in a fit condition. I know that in some large gardens where there is only a limited demand the spare plots are sometimes allowed to get into a very bad state, but this need not be. Potatoes might be grown and less room needed for the field crops; and, again, what a boon it would be to be able to dig the plots for Brussels Sprouts and other winter greens and allow them to stand until they were needed instead of having to plant after Potatoes and even in some cases on the late Broccoli quarter of the previous season. There could be no comparison in the quality of the produce grown under such different conditions, while the cultural details could be carried out in suitable weather instead of having to do the work at a time when other important things are waiting attention.

There is, in fact, no end to the advantages that accrue from having ample room, and it is certainly false economy to pinch the kitchen garden for room on estates where the land is let in many cases for a few shillings the acre. Where vegetable quarters have to be cropped several times in the year, it is only reasonable to expect that a lot of feeding with good farmyard or stable manure will be necessary. It is one thing to grow a single crop in a year and another to take two, or even three, as we must

do when double cropping has to be practised, and good, succulent vegetables take a lot of goodness from the soil. A too small kitchen garden means an endless worry to those in charge of it. A SUFFERER.

Globe Artichokes.—Owing to the limited supply of rain, Globe Artichokes in gardens where the soil is of a shallow or sandy nature will have so far made a none too robust growth. In order, however, to enable the stools to regain their normal strength, liberal treatment from the present date till the leaves and stems begin to decline must be accorded. If any stools are weak, they must not be allowed to mature all the heads they throw up; removing say one half will be of advantage in enabling the plants to build themselves up for another season. Where a good mulch was applied in spring, and this has been washed away by repeated waterings or by birds in search of insects, another must be given, also as frequent and liberal doses of farmyard manure as time and means will allow. Plants raised from small offsets and put out in May must be treated as liberally as possible. These should make good stout-bearing stools for next season.—J.

Pea awards at Chiswick.—I should be glad to know why a variety given three crosses by the fruit committee at Chiswick does not receive an award of merit, as I find, by scanning the gardening journals, several varieties had the same award and were given awards of merit at the next meeting. I fail to understand why Dwarf Triumph was omitted, and I think the reason should be given, as if it was not considered distinct, why give it three marks, or if not good enough in other ways, why bring it forward at all? I do not know Dwarf Triumph, and my contention is that a variety once recognised should receive the proper award. Of late years I notice a different course is adopted by committees of the Royal Horticultural Society, at least by the fruit and vegetable committee. In former days three marks meant a first-class certificate, two an award of merit, and one meant highly commended. The plan was good and everyone knew what these marks meant. Now it appears that three marks do not even carry an award of any kind.—AN OLD FELLOW.

Trouble with the Celery.—This season the Celery fly has been most energetic, and even before the Celery was out of the nursery beds brown and seared leaves were noticeable. On a dull, warm day at the beginning of June I saw a horde of these flies hovering round a trench of early Celery when walking round the garden of a friend. Prompt measures were at once taken, soot was dusted over the foliage, and I have since learnt that scarcely any traces of the maggot were afterwards noticed. But this is just where many people make a mistake. The mutilated leaves point plainly to the work of the grub, and they at once commence to apply soot and other remedies. It is a parallel to the case of locking the stable door when the horse is stolen, for the mischief is then done, and no insecticide is strong enough to kill the grub feeding under the outer tissues of the leaves without destroying the foliage as well. Prevention is better than cure in most cases, emphatically so in this one, and anything that is used should be in the form of a preventive in making the foliage distasteful to the fly. High cultivation is another antidote to the fly, for whenever there is any check to the growth of the plant in its early stages, that is the time when the enemy appears to do the most damage. Unfortunately, every grower has not an unlimited water supply, and where this commodity is withheld or supplied sparingly the Celery fly is almost certain to do much damage. One thing is certain—that when once the grub is there the best plan is to at once pick off the mutilated leaves, and by assisting the plants as much as possible with liquid, induce them to make fresh healthy foliage.—G. H. II.

FERNS.

ADIANTUM GLAUCOPHYLLUM.

THERE are few prettier members of the great genus *Adiantum* and probably none more easily grown than the subject of the annexed cut. It resembles a good deal *A. cuneatum*, but is of a lighter and brighter green and the pinnales differ in shape. It has short creeping rhizomes, and seems at home almost anywhere, for it will exist in an absolutely unheated house. It grows luxuriantly in the intermediate fernery where nearly all the other *Adiantums* and *Gymnogrammas* thrive, but probably a shady greenhouse temperature is as good as any. The illustration shows a specimen covering the entire exterior of a porous earthenware pitcher, which is kept filled with water, the Fern being simply tied on with wire, with a very little soil. It envelops the pitcher so completely as to render it quite invisible. The whole is suspended from the roof, the vessel being pointed at the bottom. It can be



Adiantum glaucophyllum in a porous jar. From a photograph by Mr. G. Pim, Dublin.

grown into very pretty little specimens for table decoration in 3-inch pots, and will stand being pot-bound well. *A. glaucophyllum* is a native of Mexico and Guatemala, and probably represents in N. America *A. cuneatum*, which belongs to Brazil, &c. G. PIM.

***Pteris tremula*.**—Where there is much home decoration to do seedlings of this useful Fern ought to be raised frequently, unless, as in many cases, they come up promiscuously about the pots or walls. No Fern is so easily grown or comes so quickly to a useful stage, and it is almost sure to preponderate in any batch of seedlings raised from purchased spores. Grow the plants and use them as long as they are fresh, then throw them away and bring on a clean lot of young stuff.

***Athyrium Goringianum tricolor*.**—This is a very pretty and brightly coloured Fern that is well worth growing, but does not seem to be generally cultivated at the present day. At one time I had a nice lot of it growing in a light, almost unshaded house, and the pretty green, red and silver-grey markings were always commented upon and admired. The plant is herbaceous,

dying down to the ground-line and springing up again in spring, and in a warm, sheltered rockery in Gloucestershire it lived outside through several winters, though the fronds were not so large or nearly so well coloured as under glass. These curve out over the side of the pan in which they are growing almost like those of a *Davallia*.—H.

***Adiantum Wilesianum*.**—The fronds of this fine species have a good deal more substance and are much more handsome than those of the somewhat similar *A. formosum*. Strongly grown it makes an excellent specimen plant, the large, overlapping fronds giving it a fine appearance. It is best grown in a warm greenhouse temperature, and cutting the fronds ought not to be practised at all seasons, but when thoroughly hardened each plant may be cut over. The fronds, however, are of more than annual duration, and if a good plant is wanted they ought not to be cut for decoration at all, simply removing them when they begin to decay to make room for the younger ones to ascend. Being so strong growing, a rather rougher compost than most *Adiantums* like may be given, and when healthy and rooting freely a fairly large shift is quite to its taste. Rough peat and loam, with a little leaf-mould and

fine plants. Where possible this *Gleichenia* ought to be grown so far back on the stage that it is not likely to be touched, as the fronds are even more susceptible to damage than the rhizomes. Where the points by any means do get bruised, it is not always necessary to remove the fronds entirely, but they may be cut back to the fresh portion with a pair of scissors. *G. circinata* is a native of various parts of Australia.—GROWER.

WALKS, DRIVES, AND WEED-KILLERS.

PROBABLY the greatest boon that has been conferred upon foresters and gardeners during the present generation at least is the weed-killer. The saving of labour by its application over the kingdom must have been enormous. I can well remember what the keeping of some scores of miles of gravel walks in good order on a large estate in the north meant. The hoeing and raking were very bulky items, but as the work could only be done in dry weather, squads of women and boys were set to hand-weed the walks throughout the whole summer as well. Hoeing and raking were usually abortive, in woods especially, as the walks were green again at one end of the wood before the hoe had reached the other. Later, on another estate where reduction of expenses in gardens had become the order of the day, the private roads and drives had to be tackled, and as the weed-killer had not then become known it was decided, on the advice of the gardener, to draw the line somewhere between gravel and grass, with the result that miles of gravelled walks and drives were allowed to grow green, and only those were "kept" that could be kept. In one season the abandoned roads grew green with grass, but being a hard bottom the roads in the parks never became rank and were cropped close by sheep and cattle, so that in a short time they became soft, yet firm, and some wondered why the idea of leaving them alone had never occurred to anyone before. One of the most perfect grass drives I know of was once a macadamised road, which has now for over thirty years been covered with a dense soft carpet of grass. When the carriage leaves the highway and goes on to this drive one feels as if the wheels had suddenly jumped into pneumatic tyres. This, by the way, to those who care to take the hint. In woods, of course, grass paths have to be gone over once or twice with the scythe, but the grass can usually be disposed of, which defrays the cost of cutting.

a good sprinkling of sharp silver sand, make a good compost, and this should be placed rather firmly in the pots for old-established specimens. Young growing plants may be potted a little more loosely, as the growth will be quicker, though less substantial. Grow it in a good light all the year round, shading only for an hour or two in the middle of the day.

***Gleichenia circinata*.**—This in its varied forms is one of the best of stove Ferns, and neat specimens are very elegant and light-looking. The long graceful pinnae of *G. c. semi-vestita* are even prettier than those of the type, but both should be grown and are worthy of a place in the best collections. The wiry rhizomes seem to delight in surface and atmospheric moisture and where a brisk stove temperature is maintained. It is necessary to prevent injury to the points of these, as when once checked further progress from that individual point is doubtful. For the reason stated above I tried a few small specimens in growing Sphagnum Moss, placing this over the top of the compost as a surfacing. The rhizomes extended in this material very freely, throwing up strong fronds and making very

The objections to the weed-killer have first to be disposed of. These are a supposed injury to the health of people who frequent paths where the weed-killer has been used, and a danger to cattle, game, &c. I do not know whether or not all weed-killers are alike. I have only used one, Bentley's, and after about six years' trial on garden walks, estate roads, wood walks, and pavements in and about the mansions and dwelling-houses, not a single mishap has occurred, and the parks are full of cattle, sheep, and horses and the woods full of game. The saving in labour will be guessed when it is stated that one man with proper appliances has for the above period done the work of probably ten men, and done it usually in one month, the work being let by contract. The effect upon the weeds was magical. The stirring of the surface of walks has been avoided, and the hacking of the edges of roads, much to their injury, done away with. A besom now does all the work. The first year the full dose was applied according to the directions in May and June. The second year scarcely any application was needed; the third year weeds were still few, and the killer was only applied where

they grew, and since then the annual application has been slight. It has been asserted elsewhere that the health of people in whose gardens the weed-killer has been suffered. My experience where the walks have been saturated up to the doors is that no one has ever complained of the slightest ill-effects. The same man has applied the weed-killer every year, and for a month at least is going with his nose over the can with which he applies the poison, but he has never suffered in any way, and his general appearance would satisfy the most exacting of insurance society doctors. The appliances should be kept by themselves when not in use and be locked up. All the accidents I have heard of have resulted from neglect in this respect. One gentleman wrote to another, "Do you use any of these weed-killers? I have lost three of my prize short-horns through its use." The gardener, not to be stopped, inquired further into the matter, and discovered that the cattle had sipped the liquid out of a pail carelessly left standing in the park by the man during his meal hour.

Much care is necessary in using the weed-killer in gardens where the roots of trees extend under walks. A fine plant that covered a large portion of a mansion died suddenly and inexplicably. The root was sent to a scientific expert in London not a thousand miles from South Kensington, who was as much puzzled as anybody. Later I had a chance of looking at the spot, where it could be seen that the walk sloped towards the place where the plant's roots had been. Into this depression the weed-killer had flowed and soaked, probably assisted by a shower of rain, killing the plant in a short time. I have known three instances of this kind.

RAMBLER.

Pea sticks.—A Pea that would produce heavy late crops of wrinkled marrows of the best quality on a short haul would be a boon to the gardener and his employer. Early crops some gardeners do not stick at all, but late Peas that grow from 7 feet to 9 feet high must be supported in some way, and the sticking of the rows is a laborious and expensive business. I knew a garden where there were about sixty rows of Peas sown annually, each row about 50 yards long, and which could hardly have paid for the sticking done. Each row required about 300 tall sticks, which, collected, trimmed, sharpened and delivered, cost from 5s. to 7s. per hundred, and that, together with the labour of putting them in and removing them in autumn, would bring the amount up to fully £1 per row, or to a total of about £60. Where labour is scarce the Pea crop is a source of anxiety to the gardener, and some few years back I came across one who had reduced the labour and the cost by at least half. Reasoning upon the assumption that the Pea will cling to one stick, where it had not the choice of two, and find all the support it required, he only put one row of sticks to each row of Peas, and as the rows ran north and south, as they usually do, he put the sticks firmly in on the east side of the row, as the prevailing winds were from the west or a point west. I saw these Peas (No Plus Ultra and the like) late in autumn bearing crops, and they certainly did not look as if they needed further support. Ever since he has stuck to the "one-stick plan," as he calls it, saving much precious time thereby. He is not particular about the shape of the sticks, which is another advantage. Beech and other flat-branched sticks have always been the favourites, and there have been plenty of gardeners who would have no other, but my friend takes any kind of stick that is tall enough, stout enough and twiggy enough, that he can stick firmly into the ground, and he nips off the extremities and puts them in at the bottom to thicken it there and lead the young Pea to its supports.—J. S.

FLOWER GARDEN.

A PLEA FOR SIMPLICITY IN THE FLOWER GARDEN.

WITH the advent of more natural methods of laying out gardens which have made such immense strides of late years, there is less need of bedding out—properly so-called—in many places where formerly it was the great attraction. Borders and permanent beds have encroached in the majority of gardens on the space once devoted to flower-beds. But even now, although formal beds are out of fashion, there are some places where they are desirable and indeed necessary, even in small gardens. A few beds, for instance, near the house give a brightness in early spring and late autumn which cannot easily be obtained by the use of hardy flowers, and, of course, in formal gardens such as exist round many large places the bedding-out system must always continue, modified and, as it were, softened by the introduction of hardy and fine-foliaged plants.

It is in laying out these beds that the gardener may show real taste. For instance, it may be allowable in a large Italian garden to have beds edged or carpeted or to plant various species together, and no doubt where this is done artistically, most beautiful combinations may be produced; but in smaller places or in gardens where the main features are the borders of perennials or groups of hardy flowers, nothing looks worse than to see pretentious beds. Even where these are most beautifully done they seem quite out of place. A large simple bed of some freely growing plant will in such a garden harmonise with its surroundings in a way in which the finest combinations of colour and form or perfection of edging and carpeting cannot do. And further than this, in gardens where, as I suggest, the simple form of bedding out should obtain, such plants as Begonias or Calceolarias are, I think, out of place. Beds filled full of Ivy-leaved Geraniums, Heliotropes, Pentstemons, Violas and many other free-growing and spreading plants (one kind only to each bed) lend themselves to association with hardy flowers. I would exclude, indeed, all flowers which suggest by their form an exotic origin. The same remarks apply as well to spring bedding as to summer. We ought not, in a garden such as I have indicated, to have the formal Hyacinths or Tulips in beds. But we can have Polyantheses, and Primroses, and Forget-me-nots and many other what I may call informal plants which will suggest themselves to everyone, and if these are planted so that the beds are overflowing, as it were, the effect will be charming in combination with the borders and permanent beds around.

We too often allow the gardener to show his skill in planting out and combining plants to the loss of artistic beauty, and although the results are in themselves often most beautiful, we ought not to forget that it is the effect of the whole garden, or what is seen from one point of view, that we ought to consider and not merely a part. Many gardens, more especially small ones, are marred by the incongruity of their set beds, and if a little more restraint were exercised and greater simplicity observed, the whole effect of many a beautiful place would be much enhanced.

S. T.

Cenothera Fraseri.—In my note regarding *C. Youngi* fl.-pl. and Mr. Cuthbertson's new Evening Primrose I find that I have been in error in referring *C. Fraseri* to *fruticosa*. I observe in the "Index

Kewensis" that it is said to be synonymous with *C. glauca*.—S. ARNOTT.

Tropæolum speciosum is doing well in Mr. G. F. Wilson's Wisley garden. The slender shoots are almost hidden among the branches of a white Rose, the scarlet blooms peeping out here and there, their bright hue emphasised by the abundant verdure and pure flowers of the Rose. A large Holly gives shade, and other trees hard by create the cool atmosphere which is so necessary to the continued well-being of this delightful hardy flower, in southern gardens at least.—J. C. B.

Double-flowered Martagon Lily.—This must now-a-days be assigned a place among the rare kinds, for it is seldom met with, and the name occurs in very few catalogues, yet some years ago it was quite common. This was brought forcibly home by the perusal of the catalogue of one of our prominent nurserymen, who twenty-eight years ago announced the price of the double-flowered Martagon at 1s. 6d. per bulb, being in fact at that time one of the cheapest Lilies.—H. P.

Pratia angulata.—In various portions of Mr. Wilson's Wisley garden this delightful little hardy flower covers some square yards of ground with its fresh green foliage. The pure white flowers are this year produced in unusual profusion, being shown off to great advantage by the thick carpet of verdure on which they repose. At Oakwood this is grown in a rather moist, sheltered position, but where abundance of light and a fair amount of sunshine come in the growing season.—J. C. B.

Lilium colchicum under trees.—In Mr. Wilson's Wisley garden this Lily is grown in various positions, but always in the shade of deciduous trees. In the subdued light which there prevails, the handsome pale yellow blooms are seen to advantage, and by the vigorous growth made it is evident that the plants rejoice in the shade and shelter they enjoy. Clumps of this Lily throwing up their tall stems among the branches of low-growing Apple trees have a very pleasing appearance.—J. C. B.

CARNATIONS AND PICOTEEES AT THE CRYSTAL PALACE.

THE display of these charming flowers on the occasion of the National Carnation Society's annual exhibition (southern section) was as extensive as in previous seasons and the blooms throughout were of nice quality. From the point of a mere visitor I thought the show a good one and by far the most interesting I have seen in respect of new exhibitors. When fourteen take part in competition in the class devoted to novices, I think there is a sign of some enthusiasm. The introduction of new self-coloured Carnations, yellow-ground Picotees, and those of many colours called fancies has given these flowers a great and increasing popularity. They are easy to grow in comparison to the bizzarres generally, although the old school florists do not look upon them with much favour. To an ordinary person, however much one may admire the pretty markings of the old type of flower, there is no getting away from the showiness of the newer flowers. The yellow-ground Picotees appeal to my individual taste, but before I note the varieties of excellence I would point out how confused is the present arrangement of exhibiting them. A very large and handsome kind named Voltaire was placed first in the class for half a dozen fancy Carnation blooms of the same variety, and if my memory serves me, it obtained prizes as a yellow-ground Picotee. There were instances throughout the classes of other sorts being equally mixed. I would suggest that the Carnation Society take this matter in hand, so that complaints will be less rare in the future. It would not be difficult for a small committee to make out a list of what are fancies and what are yellow ground Picotees, the same to be printed in the schedule and revised yearly. An old kind, Mrs. Douglas, is a first-rate type of a yellow ground. The bloom is not over large, well formed, clear coloured, and rich. A new variety was exhibited, which makes a distinct advance in this section, named Childe Harold. It is one of Mr. Martin Smith's latest gains. Another that easily won first prize in its class is Lady St. Oswald. This has a very deep yellow

ground with a true red margin. These two appeared to me most beautiful kinds. Badminton, Dervish, Empress Eugénie, Hygeia, Mrs. Robert Sydenham, Stanley Wrightson, and Heather Bell are among the best of older sorts.

Fancy Carnations belong to a most interesting section, the colours being so rich and varied. Perseus, Monarch, Hidalgo, Lady Ardilaun, Czarina, Geo. Cruickshank, The Dey, and Artemis are very striking among those now in commerce. Khedive, Guinevere, Charles Martel, Falca, and Pagan are new and likely to be popular in time to come. In self-coloured flowers Mrs. Eric Hambro was seen in perfect form. It would hardly be possible to obtain a better white Carnation. Ensign would appear better, as it gained the prize for premier self of the whole exhibition. I did not see a better rose-coloured bloom than Exile. Seagull is the best blush-white bloom, although Her Grace, a lighter bloom, is very fine. Endymion, salmon-red, and Mrs. James Douglas, a deeper tint of red, are magnificent kinds, quite indispensable to exhibitors. A splendid scarlet Carnation is Lady Hindlip. The Cadi is also fine. Sir Bevy's, a crimson-scarlet, somewhat new, is a rich-coloured bloom. Yellow sorts of rare beauty are Germania, Cecilia and Regina, the last, however, being a weakly grower. Apricot or buff blooms always admired were somewhat rare. Mrs. Colby Sharpin is excellent. Benbow is a new light buff kind which should be noted. Another is Winifred, now well known as a good variety. One of the points of a perfect Carnation is smoothness in the petals. In the buff-coloured class there is room for improvement in this direction. At the Crystal Palace show I noticed one thing especially, and it is a point would-be exhibitors should remember. The best prizes go to those who stage young, highly coloured, fresh flowers of medium size and even in preference to those with size as the principal merit to recommend them. The classes devoted to Carnations shown as grown on long stems did not bring out anything remarkable—at least to my taste—although it is of course the most natural way of seeing them. In such classes there seems to be less care in selecting the blooms, which are more or less confused in form and not fully open. A group of plants that contained a large number of Malmaison Mrs. Martin Smith brought out the merits of that beautiful kind. This, a rich rose tint, Nell Gwynne, white, and Lord Rosebery, dark rose, are distinct hybrids of that remarkable type. H. S.

Gypsophila paniculata.—There are few gardens where material suitable for table decoration or for filling vases and glasses in which the above indispensable hardy plant is not grown. Those, however, who do not possess it should do so, as for elegance and lightness I know of nothing to equal it. I saw it used with good effect at a local show, being in both the first and second prize table decoration. In one instance it was mixed with yellow and white Iceland Poppies, and in another with white and yellow Marguerites. Its hardiness is a great recommendation. A bush here and there intermixed with other subjects in the hardy flower border has a telling effect. It is very easily increased by root division.—N. N.

The Great Arrowhead (*Sagittaria variabilis*).—Any of our readers who are concerned with the adornment of pieces of water might find this a precious aid. It has a double flower like a great white Rocket, with very large leaves, not the same as the old double Arrowhead, but twice as large. A few plants we got of it two years ago have spread all round the water in a very rapid way. It cannot be raised by seeds, but by some floating bulbs, perhaps; but we have never seen a plant take hold more quickly, or, to do it justice, produce a better or more distinct effect, the large and handsome leaves telling very well indeed, and forming fine masses by the margin of the water. The effect of water when it is well planted or bare on the margin is singularly different.

Pieces of water with hard, water-beaten margins may be in a year or two altered very much in aspect by carefully planting quite hardy things, waterside and bank plants.

RODGERSIA PODOPHYLLA.

For a cool, half-shaded position *Rodgersia podophylla* is one of our handsomest fine-foliaged plants. This giant-leaved Saxifrage was first introduced into the United States by a Captain Rodgers, of the American Navy, after whom it is named. Its native name in Japan is Yagueumasa, but we may be well content to call it the Japan Bronze-leaf. Each leaf is supported on a central petiole or leaf-stalk varying from 1 foot to 3 feet or more in height, and the largest leaves when fully expanded each measure 3 feet across. Leaf-mould and some peat and sand mixed with the soil seem to supply its requirements, which are a cool, free root-run in a moist and partly shaded position, and each November when the leaves have withered and fallen away, a top-dressing of old manure and wood ashes will be found very beneficial. The flower-stalks are



Rodgersia podophylla. From a photograph by Mr. Greenwood Pim, Dublin.

usually few in number, but the plant herewith depicted is bearing ten feathery wands of creamy blossom, which seen against a dark background are delightfully fresh and cool in the hottest hours of leafy June. A. L. L.

Campanula pulla.—This pretty Bellflower has been very effective this year with the large bells of the deepest violet-purple on frail stems only 2 inches or 3 inches high. Of the small kinds, of which *C. pumila* may be taken as typical, it is, perhaps, the best, the richly-coloured flowers being borne singly on the stems. Quite early in July, and frequently in the latter part of June, it is seen finely in flower. Although a charming plant for the rock garden, it is scarcely suited to the border. Grown in the rock garden it requires a good depth of soil, and rich soil, too. In large pots or pans it is a good plan to divide and repot as soon as flowering is over, not merely

because the plant is much more safely handled at that time, but because it forms a large amount of new roots and underground shoots at this time. Those who have doubts of this have only to leave one plant alone and repot another, and await the next flowering to see the increased vigour of the potted plant. It is much the same with established tufts, for by dividing these and either forming new colonies or spreading a tuft out into a patch twice the size, giving fresh soil and manure, a greatly improved flowering and vigour will be maintained. Some growers recommend peat for this plant, but I have no faith in this. In good loam and finely sifted very old manure this plant may be grown to perfection. Too frequently these dwarf kinds with their myriad root fibres are left too long, exhausting the material at hand and at times becoming well-nigh flowerless.—E. J.

WATER LILIES AT WISLEY.

It is in a time of heat and drought that one is best able to appreciate the beauty of those plants that live in the water. The Water Lilies in Mr. Wilson's Wisley garden have for some time past been giving a delightful display. Very prominent among them is *Chromatella*, in which the beautiful rich yellow colour that distinguishes this kind

fades away to soft pink in the outer petals. The way in which several shades of colour imperceptibly mingle in the flowers of these hybrid Water Lilies is one of their distinguishing and most attractive features. This is especially noteworthy in *Laydekeri rosea*, the flowers of which when opening are of a pale pink, with delicately tinted margins, but which eventually in the course of several days assume a deep pink colour in the centre with rather paler edges. The difference in the early immature and perfect stages of expansion is so great, that one might easily be so far deceived as to imagine that the flowers in their different stages of expansion represent two distinct varieties. *Laydekeri purpurea* is, as its varietal name signifies, more richly coloured, but it and the above-mentioned so nearly resemble each other, that one may reasonably suppose that

they come from the same pod of seed. In *Marliacea carnea* we have a handsome bold-habited Lily, apparently as vigorous and as capable of taking care of itself as our own native species. It throws up its abundant leafage on stout stalks well above the water, the fine flesh-coloured blooms, deeper tinted on the reverse of the petals, being very conspicuous. The rich bronzy green foliage of this variety is very taking, and it will undoubtedly in time be as common in cultivation as is the white Water Lily of our streams and rivers. In great contrast to the foregoing are *pygmæa alba* and *pygmæa Helvola*, the latter with sulphur-yellow blooms. These are little gems, all the more precious as being suitable for the miniature lakes and ponds or large tanks which so many have to be contented with. In a very circumscribed area these dainty little Water Lilies are able to develop and assume their true proportions. *Exquisita*, also very pretty, is of moderate growth with narrow petalled flowers, and would be a good

companion to the above. *Odorata rosea* is in the way of *Marliacea rosea*, but with smaller and much brighter flowers. At Oakwood it grows with freedom and is very attractive. J. C.

Byfleet.

NOTES ON HARDY PLANTS.

Streptopus amplexicaulis, also known as *S. distortus*, is a graceful, though distorted plant, and the flowers are greenish white. It is because of the big and handsome berries that I note it now. These are deep orange in colour, and so large and numerous that you cannot miss a group but must stop and admire it. It grows 2 feet or rather more in height, and, like Solomon's Seal, will thrive and fruit between trees that do not cause too much shade.

Primula suffruticosa.—This Californian species is as remarkable for its distinct features as the part of the world whence it comes. As yet it is little known, having been introduced so recently as 1884. I have grown it almost ever since it came to this country, and though some books tell us it blooms in spring, I never saw flowers out of doors except at midsummer. My first opened this year July 16, and such flowers! the brightest rosy-purple intensified with the brightest yellow eye. The tree-like form of the thick and woody stems fully justifies the specific name, and the wedge-shaped leaves clustered into something like a rosette give it an effect that no other *Primula* has.

Cistus alcyonoides is at once the earliest to flower, lasts the longest in succession, and the hardiest of the genus excepting *laurifolius*, which, being perfectly hardy, it can do no more than equal.

Lilium californicum.—The richest colour I have had in the garden during July has been from a big group of this Lily. It belongs to the class of Turk's-cap and the rhizomatous-rooted sorts. It is quite one of those flowers that must be seen to know it and duly admire its beauty and intensity of colour and lively marking. I think it may be safely grouped with the few Lilies that will grow in any garden, and which as yet has not been found to be liable to any disease. If it has a preference, it is for light but moist soil. It dislikes disturbance, and may be two years before it flowers after it has been transplanted, which is best done in September.

Kirkstall.

J. Wood.

Hyacinthus candicans.—To be effective this species should be planted in large broad masses where it can make a good display and be seen from a distance. A plant or two is all very well in the herbaceous border, but it is much finer as indicated, and being one of the cheapest of bulbous plants there is nothing to prevent its being so used. The plant seems pretty well able to take care of itself, and in shrubbery beds and borders, though planted quite late in the season, it is throwing up immense spikes of flower that look very well among the handsome dark green leaves.

Iris Kämpferi.—This must be regarded as one of the finest hardy flowers of the week, and being among the latest of the Irises to flower is all the more welcome. The colours are remarkably varied and good, the flowers of large size, prettily veined and splashed. The plants bloom freely in a suitable spot, one where moisture is abundant for preference, and the flowers are very bold and striking owing to the width and substance of the petals. Those who do not care for the splashed and veined flowers will find plenty of delightful soft self tints among the varieties.

Yellow Sweet Sultan.—This is one of the most useful flowers for cutting, and at a local show I saw it used with great success in table decoration. The bright golden tint is very distinct and beautiful, and it is also one of the most free flowering plants in cultivation, a good dry weather kind and one that lasts well in a cut

state. It grows about 2 feet high and the plants may if convenient be grown where sown, as it is not one of the best to transplant. Not that it will not thrive when moved, but the roots are not of a character to relish disturbance. It is a good town plant and does best in a rather light soil.

Yucca gloriosa.—There is in the public park at Worthing a fine specimen of this noble plant, which is now in its full glory, having a splendid spike of bloom. Measuring from the lower blooms to the top, the bloom-spike is fully 6 feet, and this stands well above the foliage. I have never seen a more vigorous specimen, the plant being well clothed with healthy leaves down to the ground. I am informed by the park superintendent that there were two plants, the other being in full flower at Christmas-time, and though it did not develop such a fine spike of bloom as the present one it proved a great attraction. During a heavy gale this plant was broken off close to the ground, but the roots being left undisturbed have given a nice stock of young plants. Already a good many have been taken off, and there are more to follow. It will probably be some years before these flower. Another good specimen is in bloom in a villa garden near here.—WORTHING.

SOCIETIES AND EXHIBITIONS.

THE NATIONAL CARNATION AND PICOTEE SOCIETY

(SOUTHERN SECTION), JULY 21.

It is difficult to say of the Crystal Palace that it is a fitting place for an exhibition of cut blooms of Carnations. The vastness of the building dwarfs such flowers out of all proportion. Then a huge glass building reflecting the rays of the sun at every angle is scarcely a place in which cut flowers can remain fresh when the temperature is near 95° in the shade. From openings in the awning the sunlight poured in upon some of the tables whereon cut flowers were placed, and partly frizzled them up before they were judged. The heat in the building, large as it is, is great, and many of the blossoms, half scorched when they were brought to the Palace, speedily collapsed. In dull weather, when it is cool, and when the greatest amount of light is required, the Palace affords it, but when the weather is hottest one sighs for a building roofed other than with glass. The bare undraped tables, of a colour that afforded anything but an agreeable contrast to the flowers, brought into view a palpable incongruity. Then there were huge patches of nakedness, as if spaces had been reserved for exhibitors who did not bring their flowers. The tables for such cut blooms as Carnations should not exceed 2 feet in depth from front to back; in consequence of their greater depth there appeared to be as great a bare space as that covered with stands of blooms. Two handy men set to work as soon as the flowers were judged could so have circumscribed the table space as to reduce it fully one-third, and materially added to the attractiveness of the exhibition as a whole. It will doubtless be said that the visitors go to see the flowers, and vacant spaces on tables are of secondary importance. But an effective arrangement materially assists the effectiveness of a competitive exhibition, and is therefore not without its importance. There is no reason why the artistic element should not be more in evidence at flower shows, and it always appears to be lacking at this particular exhibition. The schedule of prizes is now so comprehensive, and as many prizes are offered in all the cut-flower classes, a large number of blooms is certain to be forthcoming. The white ground, bizarre and flaked Carnations and the white ground Picotees fell much below the average. The burning temperature of the few previous days had told severely upon them. Prizes were awarded to flowers really unworthy of them, but then all were more or less mediocre.

One well-known grower spoke of them as rubbish, and he was truthful as well as candid. The selfs, fancies, and yellow ground varieties, being larger in size and fuller in substance, and, consequently, later in development, were of better quality, some of them really very fine.

Despite the weather, there were seven stands of twenty-four blooms of Carnations, not less than twelve distinct varieties. It is interesting to note how some old varieties hold their own. Admiral Curzon and Sarah Payne, two bizarres, have been in cultivation for half a century and are still found in winning stands. Many of the leading flowers shown on this occasion have been in cultivation from ten to thirty years. Mr. Martin Rowan, Clapham, who grows his flowers near the suburban railway lines and under certain hostile conditions, won the first prize in the leading class. Of bizarres he had Admiral Curzon, Robert Houlgrave, Robert Lord, J. S. Hedderley, and William Skirving; and of flaked flowers, Sportsman, Thetis, Merton, John Buxton, Mrs. Rowan, James Douglas, Gordon Lewis, and George Melville, a very good selection. The flowers were small, fairly pure, and correct in their marking. Mr. C. Turner, Royal Nursery, Slough, came second with larger blooms, but showing signs of the heat and dryness of the atmosphere. Among the bizarres were Duke of York, Arline, Thaddeus, and Master Fred; among the flakes, Chas. Henwood, Prince George of Wales, and Guardsman. Mr. James Douglas, Great Bookham, was third, and every stand got a prize. For self Carnations (twenty-four blooms), Mr. Blick, gardener to Mr. M. R. Smith, Hayes Common, staged some of those superb varieties of his own raising, and in their size, fullness, and freshness they were in marked contrast to the bizarres and flakes. In this first prize stand were Ensign, very fine; Much the Miller and Helmsman, white; Cecilia, Miss Edith Harbord, and Michelet, yellow; Blushing Bride and Her Grace, pink and blush; Benbow, buff; Bomba, Mrs. A. Gilbey, Commander, and Conqueror, rose; Etna and Dudley Stuart, scarlet and crimson; Sir Bevis, very fine; Kira, Proserpine, and Agnes Sorrel, maroon. It is possible some of the foregoing may not be in commerce, but they are a set of splendid varieties. Mr. C. Turner came second also with some fine blooms; differing from the foregoing were Zachara, Zampa, Mrs. Buchanan, Anne Boleyn, and Miss Judith Harbord; third, Mr. J. Douglas. For fancy Carnations, Mr. Smith was again to the fore with twenty-four blooms, and here could be found in very fine character Lily, Duchess, Monarch, Goldilocks, Bedemer, with a singularly deep edging of crimson-maroon; Aglaia, Falka, The Dey, Electra, Galilee, another deeply-edged flower, in this case with crimson-purple; Guinevere, delicate amber, flaked with pink; Heroine, Alexandra, Queen Bess, Hidalgo, Cervantes, yellow, with slightly pencilled lines of carmine; Ossian, Charles Martel, &c. Mr. C. Turner was second.

Mr. Turner was first for Picotees with small flowers, clean and pure; the leading blooms were—red edges, Brunette, Etna, Mrs. Gorton, and Heart's Delight; purple edges, Amelia and Mary; rose edges, Favourite, Little Phil, Mrs. Payne, Lady E. van de Weyer, Mme. Richter, and Duchess of York. Mr. Martin Rowan was second, having red edge Morana, purple edge Miriam, and rose edge Nellie, differing from the foregoing; the last a beautiful variety, which Mr. Rowan grows to perfection. Third, Mr. F. Hooper, Bath. For Picotees, yellow ground, Mr. Martin Smith came in first this time with twelve blooms, having in very fine character Argosy, Badminton, Dinorah, Duke of Alva, Author, Fenella, Empress Eugénie, Lady Bristol, Childe Harold (a beautiful new wire-edged Picotee of great merit), Busybody, and Alcinous. Mr. C. Turner was again second. Of self Carnations, one variety, in the class for the best six blooms were those of Mrs. Eric Hambro, white, from Mr. F. A. Wellesley, Woking; Mr. C. Phillips, Bracknell, Berks, came second with Britannia, yellow; and Mr. J. Douglas third with Trojan, white. For six

blooms of fancy Carnation, one variety, Messrs. Thomson and Co., florists, Sparkhill, Birmingham, were first with six blooms of Voltaire, Mr. Wellesley coming second with Monarch. In yellow ground Picotees, one variety, Mr. M. R. Smith was again to the fore with six blooms of Lady St. Oswald; Messrs. Thomson and Co. came second with Golden Eagle.

Division 2 consisted of five classes for exhibitors with smaller collections of plants than those exhibiting in Division 1. Messrs. Thomson and Co., Birmingham, won the first prize with twelve blooms of Carnations, bizarres and flakes; Mr. R. Sydenham was second. Messrs. Thomson and Co. were also first with twelve selfs, and Mr. Charles Phillips, Bracknell, was second. Again with twelve fancies Messrs. Thomson and Co. took the lead, Mr. C. Phillips was second; and Messrs. Thomson and Co. first with twelve white ground Picotees, Mr. F. A. Wellesley, Woking, second. With six yellow ground Picotees Messrs. Thomson and Co. were first and Mr. F. A. Wellesley again second. The Birmingham blooms were good all through these classes and reflected great credit upon Mr. C. H. Herbert, the grower.

Division 3 consisted of eight small classes, which gave growers of small collections a chance—a very wise arrangement, especially as exhibitors in Division 2 could not compete in Division 3. Here, as in the previous division, the varieties shown were much the same as those exhibited in Division 1, and therefore there is no need to repeat names. The competition was exceedingly keen. In the class for six bizarres and flakes there were fourteen stands. The first prize was taken by Mr. R. C. Cartwright, an enthusiastic Birmingham amateur, and he was also first with six selfs out of twenty-two stands. Mr. S. A. West was first with six fancies, there being eighteen competitors. Mr. Cartwright was again first with six white ground Picotees, Mr. A. R. Brown first with four yellow grounds, and also with three self Carnations of one variety, having Regina, a yellow. Mr. S. A. West had the best three blooms of a fancy, staging Brodrick, and Mr. H. W. Sillem the best three blooms of a yellow ground Picotee, setting up Mrs. Douglas. There were eight classes for blooms exhibited without dressing or cards, with Carnation foliage attached to each. The competition was good throughout, and with few exceptions the flowers were not named.

There was a class for six blooms of all classes for those who have never won a prize at an exhibition of the society, and Mr. H. W. Sillem was placed first and Mr. C. L. Goodes second. A class was also provided for two cut blooms of a seedling, Mr. M. V. Charrington, Edenbridge, taking the first prize with The Sirdar, a bright rosy red self of good quality. Mr. H. W. Weguelin, Dawlish, was second with a deep rose self, unnamed; while Mr. S. F. Solley, Forest Gate, was third with a promising flesh-coloured self, also unnamed.

Certificates of merit were awarded to the following new varieties: Sir Bevys, a rich dark crimson self; Goldfinch, yellow self; Child Harold, light-edged yellow Picotee; Hesperia, a heavy-edged yellow Picotee; Erasmus, a fancy; Guinevere, a fancy; and Ensign, a splendid white self, all from Mr. M. R. Smith; to Mrs. Foster, a heavy rose-edged Picotee, from Mr. T. Lord, Todmorden; to yellow self Lady Dora, from Mr. E. Charrington, Chislehurst; and to Sirdar, self, from Mr. M. V. Charrington.

A silver cup was awarded in Division 1 to Mr. C. Blick, gardener to Mr. M. R. Smith, for the greatest number of points. It was declined by Mr. Blick, it being the gift of his employer, and was then awarded to Mr. C. Turner, Slough, as the next in order of merit. A silver cup was awarded in the second division to Messrs. Thomson and Co., and in the third division to Mr. R. C. Cartwright, both of Birmingham.

PLANTS IN POTS.—The best twelve specimens of Carnations came from Mr. M. R. Smith, the plants well grown and bloomed. Mr. J. Douglas was second. Mr. Smith had the best single

specimens; Mr. Douglas again second. In the class for a large group, Mr. M. R. Smith was again first, having a very fine lot indeed. Mr. T. Carruthers, Reigate, was second, and Mr. C. Turner third. The first prize in the smaller group was taken by Mr. J. Douglas. Mr. E. Charrington was second.

TABLE DECORATIONS.—These consisted of a dinner table arranged for twelve persons, there being seven competitors. Miss and Mr. H. Anstey, West Norwood, were placed first, having yellow Carnations and yellowish green foliage, a somewhat heavy arrangement. The Morter Stores, Ltd., were placed second, a somewhat low and formal design, with Miss Jolliffe Carnation and foliage. Mrs. J. Douglas was third, some bright touches being given to this by the use of some coloured Carnations, but it was rather heavy also. Mrs. Hadley, Reigate, had the best vase of Carnations, Mr. A. C. Charrington was second, and Mr. H. Rogers, Woodbridge, third. Mr. Rogers had the best three sprays and Mr. E. C. Gobie the best three button-holes, both of Carnations.

A few miscellaneous collections were staged. Messrs. W. Cutbush and Son, Highgate, had a large group of Malmaison and other Carnations. Mr. F. G. Foster, manager of the Brockhampton Nurseries, Havant, had a fine and varied collection of Sweet Peas, and Mr. G. W. Piper, nurseryman, Uckfield, had examples of his beautiful new Tea-scented Rose Sunrise.

NOTES OF THE WEEK.

Mr. J. Wood's Scarlet Pea.—This fine Pea is in all probability not a variety of *Lathyrus latifolius*, but of *L. rotundifolius*. Further examination and comparison of the latter with Mr. Wood's Pea procured from the garden at Woodville show that the plants are similar in foliage.—S. ARNOTT.

Scabiosa caucasica alba is among the best of good hardy border plants in flower at the moment, and a plant deserving of very extended culture. Indeed, no collection could possibly be complete without it, and good plants flower profusely over a long period. For cutting it is one of the best that could be named.

Cimicifuga racemosa.—While taking some time to form a fine specimen, the above plant is sufficiently distinct to be worth waiting for and to prove attractive meanwhile. In a deep and rather moist soil, or with plenty of moisture in summer, it is usually a success. The pretty white flowers are closely set on long spikes.

Coris monspeliensis.—This interesting little gem is one of those things that, among alpine, will ever be rare. In its growth generally it most closely resembles *Aethionema*, itself a pretty plant of more easy culture. Just recently we noted this little thing in flower in the frame ground at Kew, the pretty terminal heads of blue-lilac flowers all the more showy by reason of the conspicuous richness of the orange anthers. The plant is best increased by fresh seeds.

Tufted Pansy Blanche.—This is a large rayless white flower, and probably the best of its kind. There is little to choose between this variety and one named White Empress, and under certain conditions they appear to be synonymous. During the hot weather the flowers have stood remarkably well, and this may be attributed to the robust constitution which the plant has. In a large bed of white Tufted Pansies the variety is usually singled out as one of high quality.

Tufted Pansy Mrs. A. H. Beales.—This is a very handsome flower of considerable promise. It is devoid of coarseness, which, unfortunately, characterises many of the larger flowers. The blossoms are circular in shape and of good substance, and may be described as white—almost a pure white. A peculiarity of the blossoms is that they are pleasingly flecked with pale rosy lavender during cool or cold weather, this variation evidently appealing to the taste of some, judging by the remarks made whenever the variety under notice has been exhibited.

Sweet Peas failing.—The premature failure of the Sweet Peas has been most disappointing this season, and this notwithstanding every attention being

given in the way of removing spent blossoms and seed-pods. Copious supplies of water have repeatedly been given and every detail of culture carefully observed. A fortnight since my collection was as good as one could well wish, but now, except in just a few instances, there are very few blossoms indeed. Failure was noticeable much earlier in collections where the ground had not been specially prepared.—A. R.

Tufted Pansies for stock.—These plants have been discarded by many during the past two years owing to the drought having spoilt the display. This can be explained where the soil is hot and dry, but planted in garden soil with a subsoil of clay, or in any fairly heavy loamy soil the character of the plant is most pronounced. Three weeks since a few plants of an ordinary sort were cut hard back, and at the present time these same clumps are bristling with innumerable fresh green young growths, and of a kind calculated to make cuttings for the autumn planting. This severe handling has taken place in a collection of plants which are fully exposed to the sun's influence from early morning until sunset.—D. B.

Michauxia campanuloides.—A portion of a very fine inflorescence of this plant was brought to the Drill Hall last week by Mr. Bain, gardener to Sir Trevor Lawrence, Bart., Dorking. The most remarkable feature of the specimen was the densely flowered part of the upper portion of the raceme as shown. Whether this was due to slight injury in youth or not we are unable to say, but it culminated in a really fine spike of flowers, such as is seldom seen. The spike so often runs up to 8 feet high and but sparsely flowered throughout, that a change to the opposite is welcome.

Romneya Coulteri.—If only a solitary flower, the blossom brought to the last meeting at the Drill Hall by Messrs. Veitch and Sons was welcome. Of the purest white imaginable and fully 5 inches, if not more, in diameter, a shrub would be handsome indeed that was well covered with such flowers as these. It is a plant only for the warmest corners or most secluded spots of our gardens, and with the ripening influences of such seasons as now prevail the plant may become somewhat more content. Unfortunately, it is the undoing influence of the winter season that each year takes so much setting right in such plants as this.

Michauxia Tchihatchewi.—This species is quite removed from the well-known *M. campanuloides*, not merely in its growth, but in the manner and disposition of the flowers. These latter are white and almost sessile, and closely set on a columnar spike fully 2½ feet high. In the young state the flowers are minus the rosy pink tinge that so often characterises the older kind, and from the dense arrangement of the spike, the plant generally is without that striking character which has ever been a marked feature of *M. campanuloides*. The new plant comes from Asia Minor, and the radical leaves, which disappear with the uprising flower-spike, are usually rough and shaggy to the touch.

Campanula Mariesi alba.—The white variety of the beautiful *Campanula* (or *Platycodon*) *Mariesi* is now becoming more plentiful in gardens in which a year or two ago only the blue form was to be found. I am not quite decided as to which of the two to prefer. Both are pretty and attractive either in bud or when fully opened. Seeds saved from the white variety give a proportion of good colour, but others are not so pretty as either the pure white or the deep blue. It is to be hoped that nurserymen will not send out unbloomed seedlings to those who order the white variety. Should they do so, disappointment will often result to the purchaser.—S. ARNOTT.

Anchusa italica.—This is not a choice subject, nor one difficult to grow or increase. All the same, a fine bush laden with the intense blue flowers and so many of them is always an attraction, and being so free flowering it lasts a long time in good condition. The plant is also well known as a good bee plant.

—Mr. Charles Herrin, writing to us from Dropmore of a very beautiful form of *Anchusa*

italica, says as follows: "It is without doubt a true perennial at Dropmore, growing and flowering with great profusion year after year. I have sent it from here to many other gardens, where it has received equal praise. I do not find this variety produce seeds, but it is readily increased by root cuttings (just like Seakale), and every little bit soon forms a good plant and only requires to be buried in the border. Whether this be the correct name for it I cannot say, but I have always understood it to be so." Whether it is a distinct species or a good variety we do not know, but there is no doubt it is an excellent plant.

Zauschneria californica.—A useful discussion on the habit of this plant appeared in THE GARDEN about last March. Some correspondents with whom I sympathised complained that the flowering was so late as soon to be destroyed by cold and damp nights. It became evident that there were several varieties in cultivation. Mr. Burrell, of Cambridge, said he had a variety with large flowers which never failed to bloom before the end of July. I got two or three plants from him, and though cut back severely by the frosts of May, they are now (before the end of July) in full bloom, and the size of the flowers and vigour of the plants are far ahead of anything I have before grown or seen in the species.—C. WOLLEY-DON, *Edge Hall*.

Incarvillea grandiflora.—The comparisons and conclusions of Mr. W. E. Gumbleton are perfectly right, only there is some doubt about Regel's figure, which was made from a dried specimen and shows a rosette of leaves closely surmounted by an umbel of flowers very much resembling those of a Rhododendron. Moreover, *I. compacta* has flowered at St. Petersburg with a spike 30 inches high, and I am informed this was a seedling from collected seeds. Is what Regel figured a sixth new species, or is it an imperfect development of *I. compacta*? In any case *I. compacta* remains a shy bloomer. As to *I. lutea* there can be no doubt, as Messrs. Bureau and Franchet have determined the name, and perchance only wrong seed was gathered.—MAX LEICHTLIN, *Baden-Baden*.

Sweet Peas for table decoration.—As a rule these displays are overdone, not only in the quality of flowers used, but also in the too free use of draping material. Blossoms are frequently crowded into the various receptacles without regard to the effect each spray should have, and as a consequence a most inartistic display is made. A wise choice of colours appears to be the first thing those responsible for their arrangement should aim at, as by so doing many points are thereby gained. If the rule of never inserting a flower in the stands unless it can render a good account of itself were followed, fewer flowers would be used and a more elegant and artistic finish gained. A first prize arrangement at the recent Beckenham show was composed of Sweet Pea Aurora, and probably not more than a double handful of flowers was used altogether. The arrangement was extremely simple and pleasing.—VISITOR.

Notes from a Cornish garden.—*Ipomæa rubra cœrulea* has opened some fifteen flowers in the garden, and is certainly the best sky-blue flower ever grown here. *Gerbera Jamesoni* and *Senecio pulcher* are both flowering well, also *Swainsonia alba*, which has wintered out for two years. In the conservatory *Jacaranda mimosaefolia* has been in flower for three weeks. This plant was grown from a seed brought home eighteen months ago from Australia. *Cestrum aurantiacum* began to bloom a week ago. *Tecomia jasminoides* has been out a long time, and is always grown here now in pots, as I find it so hard to dry off if planted in a bed in the greenhouse. *Campanula Vidalii*, after being killed here regularly, has at last come on, and one plant has eight spikes and fifty-three bells fully open.—C. R.

Hardy annuals in S.W. Scotland.—Even the most enthusiastic admirer of perennial flowers

cannot but admit that annuals have not only great beauty, but also much usefulness. Thus one cannot fail to regret that so many gardens in this district have the misfortune to be losing to a great degree the aid they receive from the many beautiful hardy annuals now at command. As usual there are exceptions, but the greater number have to tell of stunted growth and want of vigour in the plants. This is having its usual effect upon the blooms, and the display of flowers is consequently small. One must attribute the comparative failure to the unfavourable weather in spring and early summer. I have lately been through a good many gardens in the district, and in the larger number of these it has been with disappointment that one has seen such a comparative failure of favourite annuals.—S. ARNOTT.

Saxifraga mutata.—I have to thank Mr. Wood for his remarks on page 85 concerning this Rockfoil. I have never been able to retain a plant of *S. mutata* after flowering, as it has always died off, and it is thus with me, as with your correspondent, practically a biennial. Mr. Wood is, however, fortunate in securing seedlings, as it is not as a rule a good seeder in this country. While the general experience in Britain is that it is a biennial in most gardens, there are exceptions, and I am led to believe that plants which do not flower very profusely do not exhaust themselves to such a degree as to cause their death. This is borne out by the references to it in several works in which it is found classed as a hardy herbaceous or perennial plant. All the same, Mr. Wood has, I think, done us service by detailing his experience. I feel personally obliged to him for so doing, and thus making clearer my reference to the plant.—S. A.

Tufted Pansy Duchess of Fife and its sports.—Notwithstanding the fact that many excellent sorts have been raised within recent years, the members of this family still hold their own. The exceptional heat of the present summer and drought in many districts have severely tried plants of this description, but in the ordeal the creeping-like growth of the Duchess type of plant has much to commend it. A generous mulch of rotten manure has no doubt assisted very materially to keep the plants in a healthy condition and also comparatively cool at the roots. This, combined with the spreading character of the growth, has enabled them to combat the exceptional heat and drought through which they are now passing. At the time of writing, the members of this family, which embrace the Duchess of Fife, Goldfinch, Duchess of Teck, and White Duchess are flowering freely and promise to continue doing so for a long time to come.—A GROWER.

Oenothera missouriensis.—While the *Oenotheras* which come into bloom in late afternoon or early evening look dowdy and comparatively unattractive by day, and are thus despised by those who see gardens only in the forenoon or early afternoon, they are very pleasing at a later hour. It is amusing, too, to observe the way in which they are looked at by those who know little about flowers, but who are deeply impressed by the idea of a plant refusing to show its beauty in the sunlight, but ready to avail itself of the later hours to display its blooms. Of the Evening Primroses of this habit and of prostrate growth (*O. missouriensis* is perhaps the most reliable and satisfactory. It comes easily from seeds and is fairly hardy in light soil. Its prostrate habit makes it a favourite for the rock garden, but it also looks well in the front of the border. Its light green leaves, large yellow blooms, and red-spotted calyces give it considerable beauty.—S. ARNOTT.

Campanula soldanellaeflora fl.-pl.—Your note on *Campanula Warleyi* in THE GARDEN of July 29 reminds me of this pretty little Hairbell, which one does not often meet with now, and *Campanula soldanellaeflora* is understood to be only a variety of *C. rotundifolia*, from which it differs solely in its flowers. When raised from seed it produces some flowers identical in every

way with those of the typical plant. Others, again, assume the form figured in the "Dictionary of Gardening," which has the segments cut up into a number of narrow divisions. This is not, however, the prettiest variety, which is that having semi-double flowers much like what one supposes from your description those of *C. Warleyi* to have. These are very pleasing when lifted up and examined, although on a low rockery their distinct character cannot be seen without doing this. I have raised seedlings from this semi-double variety, and these have varied from the typical rotundifolia to those of the parent with some intermediate forms. The only colour I have seen is dark blue.—S. ARNOTT.

Hardy flowers at Hatfield.—The borders and beds skirting the lawns at Hatfield are just now very beautiful, clump after clump of the best scarlet Phloxes, such as *Etna*, *Boule de Feu*, and *Coquelicot*, being relieved by numerous masses of *Chrysanthemum maximum*, some of a very dwarf form growing no taller than 2 ft. 6 in. In such a season as the present, where the hose can be daily applied, the Phloxes are magnificent in the extreme, and one can fully appreciate the value of M. Lemoine's achievements in giving us these splendid scarlet kinds, although several of his latest productions have anything but pleasing colours. Fine masses of *Bergamot* (*Monarda didyma*) are found here in perfection mingling with groups of *Eryngium Oliverianum* and *Helianthus rigidus*. Whilst a showy effect is aimed at, a continuous display is provided for. Grand, indeed, must have been the noble spikes of *Delphiniums*. At the extreme outer boundary some magnificent specimens of *Crimson Rambler* and *Fellenberg Roses* vie with each other in displaying gorgeous masses of colour. How much nobler herbaceous plants appear when planted boldly and thinly near a good expanse of lawn.—P.

Campanula mirabilis.—The finest form we have yet seen of this most beautiful Bellflower has been a picture of blossom in the hardy plant department at Kew for nearly three weeks. The chief difference in the Kew example is that the tips of the corolla divisions incline inwards rather than the reverse, as in other forms of this fascinating flower. Large, delightful in colour, and most profuse in its flowering are among the chief attributes of this handsome plant. In the Kew specimen between 200 and 300 flower-buds have been counted, to say nothing of scores of miniature buds that at an earlier date could not easily have been traced. At present all the fear centres in the plant being only of biennial duration, and it is certainly a drawback to so fine a flower that it takes three years, more or less varying in individual instances, to reach the flowering stage. All the same, the large, flat table of leaves that is formed is very interesting all this time. Whether biennial or not, all who can should save seeds of this most striking Caucasian Bellflower, and when fully ripe, which should not be hastened prematurely, sow at once. If kept a few months the chances are against ever securing a plant. Sow the seeds on the surface without any soil covering, and place a piece of slate or smeared glass over them to exclude strong light. In three weeks or a month the seedlings should be appearing, when more light will be required.

Ostrowskya magnifica.—Those of us who have paid some attention to the *Ostrowskya* and have experienced some trouble in trying to flower it must have observed with interest Mr. J. Wood's note on page 85. I fear, however, that even the early planting he advocates will not ensure the success anticipated. Were this so, it would follow that plants which had been left in the ground and had survived one or more winters would have a better prospect of doing well. With most people *Ostrowskya magnifica* has proved a very disappointing plant. I have known good strong plants grown from year to year which, despite every care and attention, have never thrown up a flower-stem, and have in some cases dwindled away instead of increasing in vigour. One has, errone-

ously or not, formed the impression that it is a flower which does better in a district where the winters are comparatively dry than in one where there is a good deal of rain. From plants I have seen in bloom, I feel inclined to ask if it is a plant worth a great amount of trouble. Somehow or other even when in flower it looks unhappy, and the colour soon fades if grown in full sun. In this respect the white variety, which was incidentally mentioned in THE GARDEN some time ago, ought to be superior to the blue form. The other day I had a very interesting letter from Mr. W. B. Boyd regarding a white Ostrowska which had flowered in the garden of his brother, Mr. James Boyd, of Cherrytrees, Melrose, N.B. The plant had been carefully nursed in the border for two years and was covered with a glass shade in winter. Last year it produced a single, badly-shaped bloom, but this season it has flowered well. One flower was 5 inches across at the mouth and was pure white. I believe most of us who attempt the Ostrowska will find it necessary to protect it with glass in winter, as was done at Cherrytrees. Even this assistance, as some of us know to our regret, will not always enable us to bloom a plant which it has been one of our ambitions to bring into flower.—S. ARNOTT, *Cursethorn, by Dumfries, N.B.*

PUBLIC GARDENS.

Hampstead Green for the public.—A movement has been initiated in Hampstead for purchasing a part of the old Hampstead Green on Haverstock Hill for the public. A portion was given up for the site of St. Stephen's Church, and another small corner has been dedicated to the public, but the centre portion, about an acre in size, containing some fine trees, has been put up for sale. The whole estate has been bought by a private purchaser. Though the buyer's name has not been mentioned, it is understood that the land was bought with the idea of making the Green public property. The price paid was £7500.

SEED TRIALS AT MORTLAKE.

VERY few perhaps of those who grow and enjoy the produce of a well-stocked kitchen garden have but the faintest idea of the care that is bestowed in the fixing and selecting of the best stocks of vegetables in their several departments or even the space that is needful for the conduct of a great variety of such trials. Of many things in this connection, however, some information was gathered recently by a visit to the trial grounds of Messrs. Carter and Co., seed merchants, High Holborn. The seed trial grounds of the firm are about midway between Putney and Mortlake on the South-western Railway. The plot of land is some ten or a dozen acres in extent probably, and as showing the need of such an extended area, it may be said the whole of the ground was fully occupied by trials of this or that. At the time of our visit, in mid-July, Peas, both cooking and sweet, were among the more conspicuous things—at least, so far as then in condition for undergoing comparative examination. For it is this indeed that is the primary object of such a garden. Primarily, of course, the devoting of such an area to such an object was for the express purpose of testing and recording the value of the many seeds sent out by the Holborn firm. There are some 600 or 700 trials of cooking Peas alone, a row of 12 feet or so being devoted to each. Only four days divided the sowing of the whole. Some were already ripe and the seed gathered, while others were full of promise for a good September crop. Had the planting been otherwise done, the earliness could only be a subject of conjecture. As it is, everything is substantiated by fact. It is worth mentioning, too, that no attempt is made in these trials to grow huge produce—produce for the prize stand, for example—rather is it an endeavour to retain, in so far as possible,

the true characteristics of this or that flower or vegetable. Sports of anything are ever welcomed, and particularly so of the best types of things, but before any such is put into commerce some years must elapse. The "fixing" of any new type is often a long, tedious business, and culminates frequently in a disappointing manner. For example, a new Pea to-day has to pass a variety of tests, and naturally is put into competition with the best of its class, or those most nearly allied to it. It will surprise not a few perhaps to know that a large batch of seeds is grown in the Antipodes expressly for the Holborn seedsmen, and from seeds specially sent thither by the firm. The object of this is a gain in point of time to enable them not merely to cope with foreign orders at an early date, but equally to equalise the rush of business at such a time.

The reader will readily grasp how impossible it is here to give even a summary of so complete a set of trials, but a few of the Peas may be noted. Taking Stratagem, for example, of which there were numerous rows all representing varying stocks as an example of the dwarf kinds, and it is scarcely possible to possess a finer Pea than the strains here noted. A few indeed are select strains. Delicatessé is a small wrinkled Pea valued largely by the French and in demand for canning. Princess of Wales possesses the merit of remaining green even when old-looking. Gladiator is valued by market growers, and Abundance is good on a dry soil. Here it is 3 feet high, and a good doer on dry, sandy soil. Duchess is an improved Duke of Albany, and not only in one respect, for it is more reliable, which is a great gain. Early Morn is a wrinkled Marrow as sweet in flavour as Stratagem. The Duke of Albany was very fine, as, indeed, it ever is where it is a success at all. The Carter is perhaps the giant of all, as was seen from examples brought from one of the Essex seed-growing farms. It is evidently a great success on the heavier soil of Essex, the huge pods full of grand looking Peas. It is a blunt-podded Pea, quite distinct, and very broad and long. John Howard is an early Ne Plus Ultra, which is saying much. Then came Everbearing, a most prolific kind 3 feet high here, pods blunt-ended—in short a much improved sort of the Yorkshire Hero type. Some other good kinds are The Baron, 2½ feet, a fine podded variety, strongly curved, and even on this abnormally light soil well filled with good sweet Peas. Dwarf Monarch has proved earlier than Omega, from which it was selected. It has also a larger pod. Dr. McLean at 2½ feet is very prolific, and Majestic, of the same height, carries frequently nine and even ten Peas of a good wrinkled type, with the fine flavour of Stratagem. It is a curved pod. Among late kinds, Autocrat as well as Michaelmas deserve special mention. The former is 2½ feet and the latter 3 feet high. It is doubtful indeed if, taken all in all, these two kinds can be beaten. That forerunner of many good things—Ne Plus Ultra—was noted in several stocks, and what is as yet known as Ne Plus Ultra Selected is a specially fine strain of this most reliable cropper of all Peas. King of the Marrows and Berkshire Challenge may be noted as of the same tall growth and free-cropping propensities. The last, however, is a rather small-podded Pea, but the sturdy blunt pods are well filled. The whole of the Peas noted were sown on March 23, another set following four days after being a trifle later in flower, &c.

The Broad Beans, though not of the same endless category as regards variety, were very interesting, Leviathan and Masterpiece being two of the finest, though a re selection of the former surpasses it both in the size and abundance of its pods as well as the Beans they contain. Lettuce again formed a great item in these trials, and represented a really wonderful array of this useful article. One kind, however, Green Fringe, is not merely useful from the edible standpoint, but valuable for its decorative or ornamental character, and another of the Cabbage tribe, though as yet unnamed, has the deeply lacinated character

of the Stag's-horn Fern, a name that would be quite applicable to this well-marked ornamental type. Parsley, again, was very fine, that with the prefix "Fern-leaved" being as near perfection as possible.

The foregoing is but a fragment of the many trials conducted here, the same care and zeal characterising all throughout be they large or small. It is worthy of note, too, on a soil so thin and dry that such excellent results are secured generally. E. J.

OBITUARY.

MRS. RICHARD PARKER.

It is with regret that we have to announce the death of Mrs. Parker, wife of Mr. R. Parker, gardener to the Duke of Richmond and Gordon at Goodwood. Gardening friends throughout the country will, we are sure, sympathise with Mr. Parker in the loss he has sustained.

The weather in West Herts.—The past week was the fourth very warm one that we have had in succession. On four days the shade temperature exceeded 80°. Several nights, however, were cool for the time of year, and on that preceding the 23th ult. the exposed thermometer fell to within 8° of the freezing-point. Consequently, the difference between the highest and lowest readings in the thermometer screen was on several occasions considerable, the difference on two days amounting to 32°. At the present time the ground at 2 feet deep is 6°, and at 1 foot deep as much as 8° warmer than is seasonable. No rain has fallen since the 26th ult., but a little rain-water still continues to pass through the percolation ganges. During the last six days the record of bright sunshine has averaged nearly twelve hours a day. July proved a very warm month throughout. Taking the month as a whole, it was the warmest July yet recorded here during the fourteen years over which my weather records at Berkhamsted extend. On no fewer than seven days the temperature in shade rose above 80°, while several of the nights were as exceptionally warm. Rain fell on only ten days to the aggregate depth of 2½ inches, which is about a quarter of an inch short of the average for the month. The sun shone brightly on an average for eight hours a day, or for a longer period than in any July for twelve years.—E. M., *Berkhamsted.*

Names of plants.—J. A.—7, *Campanula nobilis alba*; 8, *C. grandiflora* (Platyedon); 9, *C. hioifolia* (deep coloured var. of); 10, *C. glomerata* var.; 11, *C. carpatia*; 12, *C. persicifolia alba*; 13, *C. pusilla*.—H. B.—a, *Scirpus maritimus*; b, *Scirpus sylvaticus*.—H. Boyle.—1, *Plagianthus Lyalli* (white flowers); 2, *Pyrus Aucuparia fructu-luteo*.—T. Buckerfield.—*Cratægus Douglasi*.—R. H. Ireland.—*Brassia verrucosa*.—T. R. B.—1, *Epidendrum alatum*; 2 and 3 (labels detached). The white and rose-tipped flower is a good form of *Aerides odoratum*. The small clustered spike was past identification. It is a variety of *Pholidota*, probably *P. clypeata*.—Col. Clements.—*Datura* (*Brugmansia*) *Knightii*. We can see nothing amiss with the flowers you send.

Names of fruit.—R. Katzer.—Peaches: 1, *Montagne double* (syn., *Montauban*); 2, *Red Magdalen* (syn., *Madeleine de Courson*); 3, not recognised.

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INDEX.

(Illustrations in Italics.

Orchard and Fruit:—		Fruit and Vegetable Crops ..		Garden Flora:—			
Grape Madresfield Court ..	113	Orchids:—		Chimonanthus fragrans ..	122	Lilium giganteum ..	128
Melon Gunton Scarlet ..	115	Cypripedium Sanderianum ..	118	Chimonanthus fragrans ..	123	Newstead, Wimbleton, hardy plants at ..	129
Peach Hale's Early ..	113	Dendrobium cucullatum ..	119	Week's Work:—		Pelargoniums, tricolor ..	131
Peach trees after fruiting, treatment of ..	113	Deodrobium nobile, curious sport on ..	118	Fruits, hardy, work among ..	123	Plants, notes on hardy ..	130
Peaches, red spider on ..	114	Epidendrum Brassavola ..	118	Kitchen garden, work in the ..	124	Water Lily, red, a variety of ..	130
Pears adopted by the Congrés Pomologique of France ..	114	Nanodes Meduse ..	119	Flower:—		Nymphæa alba? ..	130
Raspberries for dessert, pecking ..	114	Oocidium lamelligerum ..	118	Campanula isophylla ..	129	Notes of the Week:—	
Strawberry M. McMahon ..	115	Oocidium pulvinatum ..	118	Carnations, yellow ground and fancy ..	131	Adenophora liliifolia ..	131
Strawberry Waterloo ..	113	Orchids, cool ..	118	Dahlia (Cactus) Britannia ..	131	Campanula betulifolia ..	131
Strawberries, failing of ..	115	Trees and Shrubs:—		Dahlia (Cactus) Magnificent ..	131	Campanula carpatia pelviformis ..	131
Vineries, airing, in hot weather ..	115	Azalea Vaseyi ..	119	Geranium Henry Jacoby ..	131	Campanula Vidali ..	132
Chrysanthemums:—		Azalea Vaseyi, flowers of ..	122	Hollyhocks, single ..	129	Eranurus Elwesianus in Westmoreland ..	132
Chrysanthemum notes ..	115	Spartium junceum ..	120	Lilies, July ..	130	Geranium cinereum album ..	131
		Ferns:—		Lilium auratum vittatum variety ..	125	Gutierrezia Eutbamiae ..	134
		Ferns on cork ..	122	Lilium giganteum, group of, at Haddon Hill, Bourne-mouth ..	128	Lilium chalcodonium ..	132
						Ostrowskya magnifica in Kent ..	132
						Passiflora Constance Elliott in S.W. Scotland ..	131
						Pea, Mr. J. Wood's scarlet ..	131
						Rodgersia podophylla ..	132
						Sidalcea Listeri ..	131
						Spigelia marilandica ..	132
						Statice latifolia ..	131
						Veratrum nigrum ..	132
						Miscellaneous:—	
						Chrysanthemums unhealthy ..	132
						Euphorbia splendens ..	122
						July in S. Devon ..	120
						Lock Kishora, Ross ..	117
						"Our Gardens," an additional page for ..	124
						Richardias, two new ..	121
						Ross-shire, a view in ..	117
						Royal Horticultural Society ..	132
						Topics, notes on current ..	117
						Weather in W. Herts ..	132

ORCHARD AND FRUIT GARDEN.

TREATMENT OF PEACH TREES AFTER FRUITING.

THE fact of the crop having been gathered from the early and second early Peach houses does not imply that the work in them is over for the season, and a good deal depends on how the trees are treated. Yet many growers, though they may have watched with regret the first appearance of red spider when the fruit was ripening, will allow this pest to make as much headway as it likes directly the fruit is over and throw open the house to take its chance. In cases where this troublesome insect has obtained a footing, the first thing to do is to see that the borders are thoroughly moist, well soaking every bit of soil in them if they appear to be on the dry side. Then with a garden engine or syringe thoroughly moisten the foliage all over, using a fair amount of force and not sparing the water. This will make the insects uneasy, and before applying any insecticide, whatever pruning is necessary should be done. This in most cases will consist principally of wood that has fruited and any chance bit of new growth that there is not room for. This latter in all cases is best left either its full length or else cut right out, as there is a danger of shoots that are stopped after this date not starting from the upper buds. Indeed, if the trees have been properly attended to with regard to tying and stopping during the season of growth, all that now remains to be done is a little pinching of sub-laterals and the removal of forefront shoots that are not needed when the fruiting wood is cut out. A good home-made remedy for red spider is an emulsion of soft soap and water with a tablespoonful of sulphur added to every gallon. Mix it to the consistency of paint to sink the sulphur, then add a pint of the mixture to a large pail of water and thoroughly wet every part of the tree with it. With patience it is quite possible to clear the trees even when badly attacked, but of course there are many proprietary insecticides that will do the work much more rapidly. Fumigation, too, will

lessen the number of insects in bad cases, but the best and surest means of keeping the trees clean is to be always at them with the syringe when the weather is bright. The idea that it prevents the wood maturing is ridiculous, for it helps rather than hinders this end by keeping the foliage clean and healthy to the last and allowing it to carry on its function of sap-elaboration and bud-development. Air in plenty is an important factor in the due development of the wood and fruit-buds, giving both vigour and strength, that stand them in good stead should the weather prove dull and cold when starting the trees. For this reason both top and bottom ventilation should be left full on night and day as long as the weather is warm, and the cool night temperature will conduce to perfect rest later on. I think under such conditions as these, over-ripening, as it is termed, is almost impossible. It is when the wood is starved from want of root moisture, the atmosphere arid, and the sun pouring down on enfeebled foliage that the trees give way, and bud-dropping and other evils are caused. I am not saying that the former can be prevented by ever so careful treatment, but the more the general tone of the tree is kept up, the less likely is it to go wrong in this or any other particular. With regard to shading after the fruit is gathered, this may be necessary in exceptional cases, but not often. It may be when a very early-ripening kind is in the same house with a much later one that a little shade over the former at the back end of the season may do good, but it may easily be over-done, and should in all cases be removed by degrees as soon as it is deemed advisable.

H. R.

Strawberry Waterloo.—I was delighted to see the fine examples of Waterloo Strawberry at the Norwich show on July 13—a rather early date, some will say, for this so-called late sort to be at its best. No doubt the latter fact was to be accounted for by the spell of tropical weather experienced just after the fruit commenced to soften. The same remarks apply to Latest of All, also shown well at Norwich. I had no opportunity of ascertaining whether the noble dishes of Waterloo were gathered from one- or two-year-old plants, but I have found that, besides a larger yield

being forthcoming from two-season plants, the fruit is not so liable to injury from strong sun-heat, which this variety is liable to. It was rather a pity that the fruit shown at Norwich should have had to compete with that of the Queen type in flavour, as the latter, size and finish being present, were of course preferred, though when ripened gradually in partial shade Waterloo is a very refreshing Strawberry, and well worth any extra trouble necessary to secure sturdy growth and fruitfulness.—J. C.

Peach Hale's Early.—This is much the best of the American varieties for flavour and one of the most useful Peaches in cultivation. In an early house it fills the break between Waterloo and Alexander and Early Grosse Mignonne better than any other kind I know, while from the last week in July until the middle of August there are no two more useful kinds than it and that fine Nectarine Early Rivers in an unheated house or Peach case. The habit of the tree is all that could be desired, and on an open wall with very little trouble in training, a round, fan-shaped tree that can easily be picked out from other kinds on the same wall is produced. Those who have tried it and found it wanting in quality when thickly trained I can strongly advise to train the new shoots 5 inches or more apart. It is very free fruiting, and no fear need be felt as regards crop, while the quality when the fruit has plenty of light is distinctly good, though, of course, falling short of that of such kinds as Noblesse and Grosse Mignonne. The colour is very fine, and it thrives equally well as a forcing kind for unheated houses or for culture on a wall.—GROWER.

Grape Madresfield Court.—I was very pleased to see this fine, but not always satisfactory Black Muscat Grape in such fine form at the Norwich show on July 13. I have seen larger bunches and perhaps berries, but the size of bunch and general finish were excellent. Probably the hot, dry atmosphere experienced of late has been all in favour of a perfect finish and freedom from cracking, although, of course, special care is needed in such seasons to keep red spider at bay. Madresfield Court is frequently seen even at exhibitions in a foxy condition. I think the finest examples of it I ever saw were at Blickling Hall some years ago. The rod, if I remember right, was inarched on to either the Black Hamburgh or Foster's Seedling, the fruit being ripe in September. Even in these perfect bunches a cracked berry would appear here and there. Cracking pure and simple, however, is quite a

different thing to the wholesale decomposition which some gardeners, myself included, have had to contend with. When living in South Notts I had charge of a Vine in a mixed house. It was inarched on the Alicante, a stock which seemed to suit it admirably; indeed, if I may use the expression, too well. The bunches were not only very large and heavily shouldered, but, thin as freely as one might, the berries swelled to such an enormous size, that wherever one pined another in the slightest degree the skin was sure to split and a sort of decomposition set in, which, if not detected at once, speedily ruined other berries and rendered the bunches useless, and this in spite of maintaining as dry an atmosphere as was possible in a mixed vinery. I never thoroughly conquered the evil, but felt convinced that actual cracking could at any rate be reduced to a minimum if the Grape had a house to itself, which I think all Grape growers will admit it deserves. I should also be inclined to confine the roots entirely to an inside border.—J. C.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 101.)

BONNE CHRÉTIEN NAPOLÉON (*syns.*, *Beurré Liard*, *Poire Médaille*, *Beurré Napoléon*, *Captif de Sainte Hélène*, *Charles X.*, *Belle Caennaise*).—Obtained originally in 1808 by M. Nicolas Liard, gardener, of Mons. The fruit is fair-sized, taking the form known as Bon Chrétien. The stalk is sometimes short, sometimes of middling length, stoutish, swollen at the point of attachment, curved or straight, set in a sometimes rough cavity. The eye is medium-sized, closed, set in a shallow, wrinkled depression. The skin is smooth, light yellow, stippled grey, strewn with some tawny stains, rarely washed with a little red on the sunny side. The flesh is white, juicy, and very agreeably aromatic. A very good fruit, maturing October, November, December. The tree is too feeble on the Quince. The tree should be grafted on the Pear, which will scarcely retard its fruiting and will not injure its fertility. It is suitable for all forms, especially for walls.

BON CHRÉTIEN WILLIAMS (*syns.*, *Williams*, *Bartlett de Boston*).—A native of Berkshire. It was raised in the year 1770 by a London nurseryman named Williams. The fruit is large, of turbinate form, slightly ribbed in contour. The stalk is stout, short, straight, set obliquely in a medium-sized, rough cavity. The eye is medium, open, set in a very shallow depression, ribbed at the edges. The skin is smooth, unctuous, golden yellow, stippled russet, with some tawny mottlings especially near the stalk, sometimes streaked with a little light red on the sunny side. The flesh is white, juicy, close, highly aromatic and musky. The fruit ripens in August and September; the tree is of moderate vigour and very fertile. In cultivation, grafted on the Pear, the tree is fertile, vigorous, and easily trained, and bears as early as when grafted upon the Quince.

BONNE DE MALINES (*syns.*, *Colmar Nelis*, *Nelis d'hiver*, *Beurré de Malines*).—Originally obtained by M. Nelis, Consul at the Court of Malines about 1814 or 1815. The fruit is medium-sized, truncated at the base. The stalk is short, stout, straight, set rather obliquely in a narrow cavity. The eye is fairly large, open, set in a wide, shallow cavity. The skin is rather rough, greenish yellow, stained tawny over a large part of its surface, stippled pale grey, rarely and slightly tinged with rosy red. The flesh is white and aromatic. A very good fruit, ripening December—January. In cultivation this variety is weak upon the Quince. On the natural stock it is more vigorous, fairly fertile, and almost as early in bearing.

BONNE D'ÉZÉE (*syns.*, *Bonne des Naies*, *Belle et Bonne d'Ézée*, *Belle des Zees*, *Bulle Excellente*).—Originally discovered in 1838 at Ezée, near Loches (Indre-et-Loire), by M. Dupuy Jamain, of Paris. The fruit is of fair size, swollen at the base. The stalk is short, stout, set obliquely in an irregular

shallow cavity. The eye is small, open, set almost flush with the fruit in a wide and very shallow depression. The skin is roughish, citron-yellow, washed and stippled red on the sunny side, with small tawny mottlings. The flesh is white, delicate, and pleasantly aromatic. A good fruit, ripening September. The tree is not sufficiently vigorous on the Quince. In cultivation this variety requires to be grafted on the Pear, when it is almost as fertile as on the Quince. It lends itself to all forms.

BONSERRE DE SAINT DENIS.—Originally obtained in 1863 by M. André Leroy, and named after M. Bonserre de Saint Denis, author of the "Dictionnaire de Pomologie." The fruit is medium sized, almost spherical, nearly as wide as high. The stalk is short, stoutish, straight, set obliquely in a narrow, shallow cavity. The eye is large, closed or half-closed, set in a wide and shallow depression. The skin is rough, greenish yellow, stained russet and stippled red. The flesh is whitish, delicate, juicy, very sweet, and gritty at the centre. A good fruit, ripening December to January. The tree is of moderate vigour and bears freely. In cultivation this variety is suitable for all forms, as well on the Quince as on the natural stock.

BONTOC (*syn.*, *Notre Dame*).—This has been grown for many years in the Gironde. The fruit is small, the stalk of medium length, slender, curved, set almost straight in a small embossed cavity. The eye is large, open, projecting, placed in the centre of a slight depression. The skin is smooth, pale yellow, rarely tinged with a little red, stippled brown, washed tawny round the stalk. The flesh is greenish, melting, and soon goes off. A good fruit, ripening August to September. The tree is of middling vigour and fertile. In cultivation the tree does not succeed upon the Quince; it is very vigorous on the natural stock. Its proper place is the orchard as a standard tree.

BOUVIER BOURGEMESTRE (*syn.*, *Nouveau Bouvier Bourgmeister*).—Originally obtained from seed in 1824 by M. Bouvier, formerly burgomaster of Jodoigne. It first bore fruit in 1842. The fruit is medium or fair sized, the stalk longish, of medium stoutness, set obliquely in a narrow cavity. The eye is medium-sized, half closed, set in a wrinkled shallow cavity. The skin is rough, golden yellow, stippled red, mottled with dark bronze stains. The flesh is white and aromatic. A good fruit, maturing November. The tree is of moderate vigour and fertile. It prefers a wall.

BRANDYWINE.—Originally found on the farm of Mr. Elie Harvey at Chaddsworth, on the Brandywine River, Delaware, U.S.A. The fruit is of medium size, the stalk of medium length, straight and set obliquely in a slightly embossed and narrow opening. The eye is small, half opened, set in a wide, shallow depression. The skin is firm, citron-yellow, almost entirely covered with bronze, with a dull crimson stippled with light brown on the sunny side. The flesh is white, pleasantly acidulate and aromatic. A good or very good fruit, ripening July and August. The tree is of normal vigour and fertile. In cultivation this variety lends itself to all forms and is at home in all soils.

BROOM PARK (*syn.*, *Brum Park*).—Originally found before 1838 by Mr. Knight, president of the Horticultural Society of London. The fruit is medium sized, spherical, bumpy, depressed at the two ends and wider than high. The stalk is of middling stoutness, curved, set obliquely in a fairly deep, wide and ribbed cavity. The eye is medium sized, open, set in a cavity of medium width and depth, embossed at the edges. The stem is rough, thick, dull yellow, strongly stippled red, mottled with brown. The flesh is whitish or slightly yellow, juicy, and aromatic. A good fruit, ripening December to January. In cultivation this variety requires a wall. It is rather feeble upon the Quince and requires to be double grafted in order to form trees of good dimensions.

BRUNE GASSELIN.—Originally obtained in 1854 by M. Durand Gasselien, an architect, of Nantes.

The fruit is medium sized, ovoid, truncated at the base, rarely pyriform. The stalk is short, stout, and sometimes of medium length, set in a narrow, shallow cavity. The eye is small, open, set in a very shallow, wide, and rather wrinkled depression. The skin is rather rough, yellowish, almost entirely washed with brown, warmer on the sunny side, stippled grey. The flesh is yellowish, juicy, and very agreeably aromatic. A very good fruit, ripening October to November. In cultivation this variety adapts itself to all forms; naturally it takes the pyramidal shape.

CATILLAC (*syns.*, *Cadillac*, *Gros Monarque*, *Chartreuse*).—Of ancient, unknown origin. The fruit is very large, turbinate, almost as wide as high. The stalk is of medium length and curved, set obliquely in a deep, narrow, embossed cavity. The eye is large, closed or half-closed, set in a wide, deepish cavity. The skin is rough, yellow, golden in the sun, washed with brown, and rarely tinged with dull red. The flesh is white, coarse, crisp, gritty, and sour. A good fruit for cooking, ripening January to May. The tree is of normal vigour and fertile. In cultivation this variety adapts itself but little to regular forms; it is best as a standard on the Pear.

(To be continued.)

RED SPIDER ON PEACHES.

As Peach growers are aware, when once red spider becomes established on trees on open wall, it is almost impossible to destroy it. I have no doubt that in many instances this formidable foe commences its operations at a very early date and so escapes the attention of the grower until it is too firmly established to allow of its being effectually dealt with that season. In the gardens of Lake House, Byfleet, it was pointed out to me that spider was present on the young leaves just as the fruit was setting. Mr. P. Bradley, the gardener, is of opinion that Peaches are very liable to the attacks of spider at such an early date when the walls are old or have not been pointed for some time. The walls get hot under the influence of the bright spring sunshine, and the insects, finding the conditions congenial for increase, fasten at once on the immature foliage. I must confess I was surprised to see red spider at work in the open air so early in the year, for in a general way one does not see much trace of it before the turn of the days. The arid atmosphere which frequently characterises the month of July causes this pest to spread with great rapidity, so that where it has been quietly at work for a couple of months previously, infested plants are sure to suffer grievously. Mr. Bradley acts on the stitch-in-time principle, and as soon as he perceives the faintest signs of spider, syringes at frequent intervals with soft soap and sulphur. By doing this, he prevents the insects from getting a firm grip of the trees. They cannot multiply as they otherwise would, and the tender leafage, which would be a rich feast, is thus rendered unpalatable. Red spider, as is well known, only attacks the under sides of the leaves, and when these are but partly developed it is easier to apply the insecticide in a thorough manner. I am inclined to think that nothing suffers more from a severe attack than the Peach. The wood gets into an over-hardened condition, from which it never seems to recover. In an old garden there once existed some good Peach trees which were the owner's pride. They yearly made good growth, and in favourable seasons bore good crops of excellent fruit. For a good many years the walls were not pointed, and then came several very hot, dry summers. The trees were very badly attacked. Various remedies were ineffectually tried, but the result was that entire branches eventually died away. J. C. B.

Packing Raspberries for dessert.—I have had to pack Raspberries several times this season, and no one who has had to do this will, I think, envy me the job. No fruit is more easily damaged. I have tried several plans, but the best of all

is the old-fashioned one of packing with strips of Rhubarb leaves cut about an inch wide and of suitable length, according to that of the boxes. Tin boxes with closely fitting lids are best, and two layers may be sent with pieces of Rhubarb leaf at the bottom, top and between the layers.—GROWER.

Melon Gunton Scarlet.—In all probability this will eventually become as popular as the now well-known Gunton Orange. I do not know any scarlet variety which has a deeper, richer flesh and which can be eaten right down to the skin. The colour is very pronounced, and I think that either *bona-fide* scarlet or green-fleshed varieties are more generally appreciated than the white-fleshed. Many gardeners now-a-days fight shy of the huge varieties, preferring those of medium size, which can be eaten at one meal. In my opinion a Melon should never enter the dining-room a second time after being cut. Scarlet Premier, Blenheim Orange and Read's Scarlet are all good Melons, and Gunton Scarlet is a worthy addition to a none too numerous class.—J. C.

Strawberry M. McMahon.—At page 75 J. Crawford asks for information about the above-named Strawberry. A few days ago I was in W. E. Gumbleton's garden, Belgrove. I asked the gardener what his experience after growing nearly every known variety of Strawberry was, and he said for general cropping and quality he placed McMahon first. This is my experience also, and for market use it has taken the place of all others in the neighbourhood of Cork, showing that it is a general favourite. It is a very compact grower, with short flower-stalks, so that the flowers are protected from spring frost by the leaves. Two or three plants may be grown in the same space as one Sir Joseph Paxton or other strong variety. What is true of this Strawberry here may not be true in any other locality or soil.—W. O., *Fota, Cork.*

Airing vineries in hot weather.—Gardeners recognise the importance of giving a little air to vineries almost as soon as the sun strikes the house or by the time the thermometer has run up 3° or 4°. Of course, the time at which air is needed depends on the position the house occupies. I have known span roofed houses running north and south to be aired at 5 a.m. Although not a believer in the necessity of night air in lean-to vineries facing due south, except, of course, during tropical weather, I think it is safest to leave the ventilators open a little way all night in houses running north and south. The Grape or Peach grower is then on the safe side. This can be increased in good time in the morning. This is the chief point in airing vineries at midsummer. An amateur whose vinery I inspected recently had adopted the wise and effectual plan of securing a current of air through his house by removing the glass door and substituting one made of ordinary wire netting.—C.

Failure of Strawberries.—Seldom has there been such a general failure of the Strawberry crop as during the present year. The failure is set down to that old time-worn theory of late spring frost. I am not prepared to say that spring frost did not do any mischief, but I am sure that if the present spring had been a mild, genial one the Strawberry crop would still have been far below an average. My idea is that the mischief was done twelve months ago, when the drought that prevailed then, as it does now and has done for several years past, continued to increase in severity right up to the end of September, so that the season when the crowns ought to have been formed and ready for going to rest found them just starting into growth with copious autumn rains, which continued right up to the time when the Strawberry plants ought to have been just starting from their winter's rest. In reality they had no rest at all; consequently, as might be expected, the bloom spikes were very poor. Even young plants that almost invariably bloom and swell off some fine fruits were more than half flowerless, and did not finish off the few fruits they had to anything like a full size. Those who have beds suffering from drought now should

lose no time in getting them cleared of runners and thoroughly soaked with water, for unless the crowns are able to perfect their growth at the proper time, viz., before the end of September, no amount of growth made in the dark days of autumn will give a full crop of fruit.—JAMES GROOM, *Gosport.*

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

THIS season so far will be remembered for its absence of rain, at least in the south. I have never known the soil so dry, although for several summers there has been some difficulty in getting proper growth in the plants. In pots, however, Chrysanthemums do not suffer, and sunny weather has the effect of ripening the wood satisfactorily. Where watering has been done with the necessary regularity there is little to complain of in the present look of the plants, and there is no danger of gross growth if over-feeding with manures does not follow. That somewhat intricate detail of selecting flower-buds is one which must engage the attention of those who cultivate for exhibition, or, in fact, desire to obtain what are called big blooms. Growth has taken place so rapidly of late, that many kinds at the time of writing are showing crown buds at the points of the shoots. Some sorts have even grown to the stage and second crown buds are appearing. But the wisest plan in regard to them is to pinch out and allow the points of the growths to proceed to another stage, selecting those flower-buds which appear later. An exception is in the variety Mrs. H. Weeks, the blooms of which take a considerable time to develop. General rules as to bud selection are these: Japanese kinds require a longer time to open the flowers than do the incurved, which grow imperfect in form if buds be retained before the end of August. Japanese kinds, too, of an incurving shape like Oceana must be allowed a longer period for the blooms to open than the loose reflexing forms like Vivand Morel. Again, the great wide, thick-petalled sorts—E. Molyneux, for instance—take a long time to unfold their blossoms, and should be remembered accordingly. Both in colour and form, flowers resulting from buds retained not before the last week in August will be better than from those selected now, although in size alone early buds have the advantage. But the two first-named qualities are to be preferred to the latter. Among new varieties that are likely to be seen pretty frequently this year I know of none requiring such special treatment in the matter of buds as the sort mentioned, Mrs. H. Weeks. John Pockett, J. Chamberlain, Le Grand Dragon, Marie Calvat, Nelly Pockett, Mrs. W. Mease, Chatsworth, Mr. T. Carrington, President Bevan, and Surpasse Amiral are all Japanese kinds to which the above remarks apply. Quite new kinds now on trial for the first time will all be treated to late bud-selection, as this has been found the better plan until a sort becomes known through its peculiarities being watched for one season.

Outdoor Chrysanthemums started well, but they now present rather a sorry appearance. The first blooms struggle to open, and rain is the only thing wanted to bring a satisfactory display. Watering, unless thoroughly done, is useless, and when one has to deal with a number of plants it is out of the question. It is difficult, too, to keep the leaves free from insect pests under the trying conditions of extreme drought. The rust which caused a great amount of concern last year has not been heard of this, and I

fancy it had troubled much before this date a year back, so that one may reasonably hope it was only a periodical fungus. Minute thrips are the most troublesome pest I have to deal with on a hot, sandy soil. Some sorts appear to be especially liked. Australian Gold, Mme. G. Bruant, and J. Chamberlain are kinds which have the points of growth quite stunted in spite of being several times dusted with tobacco powder. Mme. Carnot, with the sports G. J. Warren and Mrs. W. Mease, have caused trouble in the matter of shedding their lower leaves prematurely, but now seem to be growing out of what may be a disease peculiar to the kind. Dwarfness of the growth has fortunately been considered by the raisers of most of the newer kinds, the seedlings of Mr. Weeks, of Derby, being noticeable in this respect. One could name sorts of recent introduction that will soon go out of cultivation because of an ungainly habit. Australia is too tall for ordinary greenhouses to hold it, and Mary Molyneux, in spite of a reputation for being a fine flower, grows so high that it will not be cultivated long. H. S.

FRUIT AND VEGETABLE CROPS.

IN this district the weather during the past spring can hardly be described as favourable to either fruit or vegetable crops. Severe frosts were prevalent during the time many of the fruit trees were in bloom, which resulted in much damage being done, and in many instances only light crops can be recorded, the same conditions being equally against the progress of early vegetables growing in rather exposed positions. During May and June, when warm rains were so much needed to give an impetus to latent or backward growth, dry weather prevailed, which added considerably to the difficulties of the gardener. Here we are situated midway between the coast line and the South Downs, and rain often follows one or the other lines, but other localities may not have suffered so much from early drought.

In connection with fruit, if we take wall trees first, Plums and Pears suffered the most from the frost, the former being practically a failure, while Pears are only a moderate crop with the exception of a few varieties which appear to have escaped its ravages. Morelle Cherries, too, are only half a crop, while dessert kinds are scarcer than usual. With Peaches and Nectarines, however, nothing can be complained of, as a good set was not only obtained, but the fruit at the present time is developing kindly. Gatherings of such varieties as Hale's Early and Amsden June were commenced from south walls on July 6, the size and quality of the fruit being all that could be desired. Some of the trees were so thickly set with fruit that severe thinning had to be resorted to. I attribute this success, in spite of repeated frosts while the trees were in flower, to the warm south walls against which they are trained, together with the protection of a double thickness of a Strawberry net suspended loosely about 18 inches from the brickwork. The early mulching of the border with cow manure, followed by copious waterings, has done the rest to ensure heavy crops of Peaches. Both Plums and Pears are also very scarce on standard, pyramid, and bush trees, but, fortunately, Apples are fairly plentiful, and though the trees are not carrying heavy crops, the fruit at the present time promises to be of good even size without the undersized, deformed specimens too plentiful when there is a glut. In respect to

bush fruit, Red Currants may be termed an average crop. Black good in every way, and the bushes free of mite. Gooseberry plantations suffered rather severely in the spring both from the attacks of birds on the buds as well as the frost, but still there have been sufficient berries for all requirements. It is rather curious that while the bushes in the open ground suffered from the above causes, trees trained to wire trellises (upright cordon system) escaped. These are now strung with fine fruit, and being easily netted, they prove both valuable and welcome for dessert. Strawberries appear to have proved disappointing this year generally, but in most instances it is an error to blame the present season altogether for the deficiency. Here, young plantations have yielded a very heavy crop of fine berries, but older ones, that went through the trying ordeal of last summer's drought, failed, and have not compensated for the site devoted to them. This should force the fact upon growers that during dry summers such as we have experienced recently, old plantations cannot be relied upon, and the only sure way of securing a full crop is to plant healthy young stock on rich deep soil not later than the first week in August. This, I am convinced, is the only way of providing the best results annually, and it pays. I believe it is difficult for some growers to realise this, but the enclosed bill of sale will show that, grown in the way described, gatherings from outdoor plants will realise 2s. per lb. wholesale, these being simply an overplus after the home consumption had been supplied, the variety depended upon being Royal Sovereign. Probably in no other locality are Figs grown more successfully in the open than hereabouts. Large standard trees are now swelling off heavy crops of fine fruit which will be ripe in August. Nuts are also grown extensively, but both the large Cob and pink Filbert have only moderate crops this season. Mulberries appear never to fail, as most years these bear freely, but perhaps never more so than this one.

Early Potatoes suffered from the want of moisture; therefore the produce from such kinds as Sharpe's Victor and Ringleader ran small. Second earlies suffered too from a like cause, but not to the same extent, Early Rose for instance proving most satisfactory. All late kinds look promising, especially Up-to-date, which I have planted extensively. Peas are generally one of the first crops to show signs of distress after a few weeks of dry weather, but experience causes one to prepare for this, and I only sow mid-season varieties on deeply prepared ground. Many bushels of the finest quality have to be provided here at the end of July, and to avoid any fear of a famine trenches are prepared in winter or early spring the same as for Celery, and then sowings every ten days are made of one variety—Ne Plus Ultra. It would be useless to expect a succession of heavy crops during a dry summer here unless this method was resorted to. To have Scarlet Runners in at the same time and plenty of them, seed is sown in 6-inch pots early, and the young plants protected in cold frames until it is safe to put them out. Gathering can then commence by the third week in July. Similar means are employed in connection with French Beans and Vegetable Marrows, as there is no demand for either after the first week in August. To keep up a supply of good Lettuce during the heat of summer I have ceased to trouble about transplanting seedlings, as such work cannot be followed without a check being given to growth. Seed is sown thinly on deep, rich ground, the seedlings being afterwards

thinned out to allow room for those retained to develop. The waste of seed is trifling compared to the cost of transplanting and subsequent loss of stock, while certainly finer hearts are obtained by leaving the plants where sown. Onions are very satisfactory, which I attribute to preparing the site early and the use of soot some weeks in advance of sowing the seed, which, by the way, is also put in much earlier than the recognised dates, viz., about the middle of March. I find the beginning of March, or even February, the best time for sowing this important crop, as the plants become strong and can better resist attacks from the grub. Among the different root crops, perhaps Turnips have proved the most disappointing, but now we have had some nice rains, less difficulty will be found in getting a good clean plant, and better hopes are entertained for autumn and winter crops. At the time of writing (July 13) the heat is less intense, which, with occasional showers, favours the main planting of all kinds of winter stuff, such as Broccoli, Kales, Savoys, &c., as well as Celery, and prospects generally are more promising for a full yield of most things. R. PARKER.

Goodwood.

SOUTHERN.

Aldenham House, Elstree, Herts.—The fruit crops in this district are very poor. Apples generally are very thin and the trees badly infested with American blight. I have never before seen them so bad. The varieties which are bearing best are Cox's Orange Pippin, Hanwell Souring, Keswick Codlin, King of the Pippins, Lane's Prince Albert, Court Pendu Plat, and Ecklinville Pippin. Pears are a fair crop on walls, but on pyramids and standards a failure. The whole of the standard Plums and Damsons were ruined by bullfinches just as the buds were swelling, and I was compelled to protect the whole of the wall trees with netting, or these would have suffered in the same way. Fortunately, I have good crops on the walls. Peaches and Nectarines I do not attempt outside, but under glass I never had them better. Apricots are fair and the trees look healthy. Cherries are very fine on walls, except Morellos, which are thin and poor. Nuts are thin. Strawberries have been the most unsatisfactory crop since I have been at Aldenham—fifteen years. Royal Sovereign and Latest of All were the best. I attribute this to late frosts and continued drought. Raspberries very fine and plentiful. Gooseberries very poor. These suffered very much from the late spring frosts. Currants, Red and White fair, Black very fine.

Vegetables of all kinds plentiful and good. The Potato crop promises well and up to this date free from disease.—EDWIN BECKETT.

Claremont, Esher.—The fruit crop, taken as a whole, is below average. Apples are partial—in some cases good, in others very thin indeed, a remark that applies both to dessert and cooking kinds. The quality seems likely to be good and the maggot is not so troublesome. Apricots are very thin, not half a crop. Cherries, both dessert and Morello, are also considerably below average. Peaches and Nectarines are a good average crop, the set nothing like so thick as usual, but enough to furnish the crop. Quality bids fair to be good. Trees of Waterloo and Alexander already (July 17) cleared have given very good fruit. Pears are decidedly below average, but, fortunately, some good and reliable sorts, as Louise Bonne, Baurré Superfin, Doyenné du Comice and Glou Morceau, are carrying very fair crops. Plums on walls (I do not grow them in the open), both dessert and cooking, are well up to the average. Fruit of Early Prolific has been picked to-day (July 17). Small fruits as a whole are a good average crop. Gooseberries and Raspberries are thin, but all kinds of Currants and Strawberries plentiful. I mulched the latter with good holding manure early in the year and protected blossom with a

double thickness of fish netting supported by binders, measures that proved effectual in resisting both drought and frost.

Vegetables are on the whole satisfactory, but in the majority of cases a considerable amount of labour to mulch and water has been necessary to keep them up to the mark. Earliest Potatoes ripened somewhat prematurely and were very small.—E. BURRELL.

Leigh Park Gardens, Havant, Hants.—On the whole the fruit crops about this part are under average. Some sorts of Apples are a fair crop, including Lord Suffield, Keswick Codlin, Duchess of Oldenburgh, Bramley's Seedling, and other free-setting sorts. Pears have suffered much from birds, principally bullfinches, which devoured the buds wholesale, so that the crop will be light. Peaches on walls outdoors are fairly good, but suffered from a severe frost when they were in bloom. Strawberries, notwithstanding the dry season, have been a nice crop where they could be watered before ripening, but where left unwatered are almost a failure; Royal Sovereign and Sir Charles Napier proved the best this season. Small fruits are rather under average, with the exception of Black and Red Currants, which are very good. Morello Cherries are a nice crop. I have a tree planted against a south wall carrying an immense crop. It has done so for several years, and, coming in early, does me good service.

Vegetables are suffering from the prolonged dry weather. I fear early Potatoes will be much under average; late sorts are looking well where there is a good depth of soil. Peas in trenched ground are carrying a magnificent crop. The best sorts with me for main crop are Duke of Albany, Telegraph, Autocrat, and Ne Plus Ultra. Cabbages have not been so good. Early Rainham, when one can get the true sort, is one of the best either for a gentleman's table or for market, as it can be sown early without fear of running to seed; in fact, not one in a hundred will run. It is of good size and comes in very quickly. Should we get rain soon, Onions, Carrots, Scarlet Runner Beans, Cauliflowers, and the different Coleworts will be fairly good.—E. PENFOLD.

Bearwood Gardens, Wokingham.—The fruit crops here and in the neighbourhood are bad. There was abundance of bloom on wall and standard trees, with a good set of fruit on most sorts, but the terrible frost in Whitsun week destroyed Pears, Plums, and most of the Strawberries. Apricots, Peaches, and Nectarines are under average; Apples very good in places; bush fruits very good, only small from want of rain. I never remember a more disastrous season from the severe frosts.

Vegetables are suffering badly from the severe drought.—JAMES TEGG.

The Gardens, Brookwood Asylum, Woking.—Owing to the very dry summer and autumn of 1898 and the frequent spring frosts of the present year, the fruit crops as a whole are rather poor. Apples are about a third of a crop; Pears and Plums very thin; Currants not half a crop (Black are the best). Gooseberries and Raspberries are good; Strawberries not half a crop; Peaches a moderate crop, trees healthy; Apricots very thin; Figs poor.

Potatoes are very much checked in growth owing to the dry weather. The early sorts will not be more than half a crop. The late sorts promise well, and will be good if we get rain enough in time. Cabbages are late and difficult to obtain owing to the bad seed time. I have had plenty, but rather late. Onions are good. Peas and Broad Beans are poor through dry weather. The winter green crops want rain.—R. LLOYD.

Cassiobury Gardens, Watford, Herts.—Generally speaking, the Apple and Pear crop is under average; Plums very poor; Cherries under average; Peaches and Nectarines average; Apricots under average; Strawberries average crop, but short season owing to the drought. Small fruits an average crop.

Vegetable crops looked very promising till end of June, but owing to the continued drought all are suffering very much now.—CHAS. DEANE.

A VIEW IN ROSS-SHIRE, N.B.

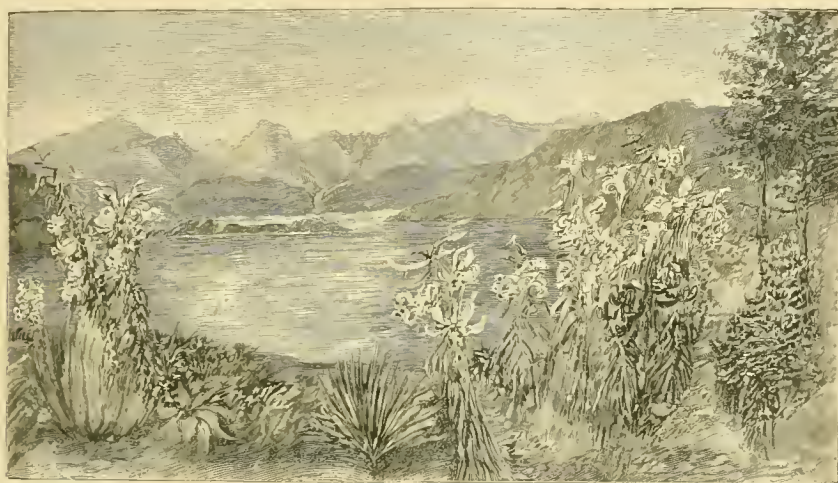
THE two promontories are extremities of an amphitheatre enfolding the loch and forming a fine harbour. The southern shore is clothed with Birch wood almost to the water's brink, whilst on the northern coast may be seen the magnificent corries of Applecross and barren precipitous rocks of old red sandstone, still the haunt of golden eagle and peregrine falcon. From the estuary of the river Kishorn, which bounds the Applecross Forest inland, in beautiful contrast lie the limestone lands of Kishorn, rich in pastures and it is said also in minerals. The portion of garden ground represented in the drawing is again not on limestone, but on another formation, a conglomerate, I think, which may account partly for successful culture of Japanese Lilies on this spot when not devoured by rats or mice. Most Japanese plants thrive here on suitable soil. It is possible that being situated on an earthquake line may conduce to warmth and fertility, and the influence of the Gulf stream is felt, although it actually touches the coast further to the northward. We have not, however, the golden rays

NOTES ON CURRENT TOPICS.

WELL-GROWN TUFTED PANSIES.—The Tufted Pansy, like some other hardy plants, is never seen at its best outdoors. Some of the strong, erect-growing kinds, like Countess of Wharncliffe, would hardly be recognised grown in a pot of good soil in a perfectly cool frame plunged in ashes and allowed to expand its first crop of flowers unhindered. Under these conditions the flowers are of a size and substance and their foot-stalks of a length and stoutness never seen outdoors in a border. I have seen a large frame full of such plants which if placed on an exhibition table would have produced a sensation. Like the Strawberry, the first flowers are the best and largest, and in frames they are of a purity in colour not seen outdoors. I have seen such plants used for house decoration singly and in masses, in pots, so fine as to excite the admiration of all who saw them. The culture, which is simple and easy, is as follows: Prepare a compost consisting of good strong loam, leaf-mould, and rotten manure in about equal quantities, and in that, in autumn, pot good slips, four or five in a 5 inch pot. Do not put more than one crock in the pot for drainage, a cool, moist rooting medium being what the Viola loves. Plunge the plants in a quite cold frame and let them remain there

exactly after the housemaid's carpet-sweeper, an excellent appliance which does its work well, only it is apt to get clogged like the grass sweeper and has to be cleared out in the same way. The difficulty with the sweeper has been to get it to make as clean a job as the common besom, and deal with worm casts and other obstructions. The lawn-mower sweeps as well as cuts, and need not be followed by the sweeper, which should really come in when the mower is laid up for the winter. Lawn-mowers are supposed to have reached perfection, but what a boon it would be if they could only be made lighter. The idea of the mower was originally derived from the similar little machine employed in the Yorkshire mills to shave the pile of velvet cloths, but weight had to be attached to the grass-mower in order to drive the knives, and the longer the grass the greater the force required. With the lightest lawn-mower in use the work is the hardest that the garden labourer is put to, and constant work at it in summer weather is slavery. The labour is easier when the grass is cut before it gets long, but the exigencies of work drive the cutting to the last minute, and the tugging, backing and pulling involved are laborious. Not so long ago, in a well known Scotch garden, I saw two men, stripped, pulling at a "two-man" machine that a donkey at least ought to have been put to. The weight of the lawn-mower lies chiefly in the roller, the object of the latter originally being to roll the lawn every time it was cut. No lawn, however, needs to be rolled often, and certainly not every time it is cut, and the roller is nothing else than an encumbrance and dead weight in dry weather on a light lawn, when a much less weight would drive the knives. Even the so-called "rollerless" machines are too heavy, the weight being simply transferred elsewhere with no compensating advantage. They are all too heavy to the last screw. A certain amount of weight is wanted to drive the knives, but, that secured, all other parts should be as light as possible. During the past few days I have been trying to operate with a "lady's lawn-mower," the particular name of which indicates that it surpasses all others, and find it to be about as heavy as a modern plough and harder to work. The lady gave it up long ago, and now a stout labourer performs with it and finds it heavy work.

THE GARDEN SPADE.—One day a gardener went into the warehouse of a well-known firm that makes a speciality of garden tools, and, making some inquiries on that head, was told that the firm had everything up-to-date. "Except spades," said the gardener. "Why," responded the shopman, "our patent etcetera spade is very well known." "Who invented it?" said the gardener. "It is our own invention," said the other. "I thought so," said the gardener; "no one who has learned the art of digging would have invented your spade." Then the gardener, taking one of the spades, showed the dealer that the blade and the handle formed a very obtuse angle, and that when the blade stood perpendicularly—as it should do—in the soil when digging, the handle projected forward about 6 inches beyond the blade, and that the digger had to lean forward so far as almost to overbalance himself, while losing power over the implement. The idea of the inventor of this spade was that the bend at the junction of the handle with the spade gave the digger leverage, whereas it is a spade that is wanted, not a lever. The Scotch spade, handle and blade, is nearly straight, and the reason of that shape is that it enables the digger to insert his spade straight down, to the greatest depth, deep digging, like deep ploughing, being of the first importance in the production of garden crops. With the obtuse-handled tool the digger, never inclined to dig as straight and deep at any time as the gardener would like him to do, puts the spade in at an angle, a little less than 45° perhaps, but at any rate at a slope that misses the bottom soil, and 2 or 3 inches may be lost. I remember the editor of THE GARDEN long ago saying that digging was a "lovely art," and so it is when well done. Old Scotch gardeners used to ask "Can you dig?" for they dearly loved a good



Loch Kishorn, Ross, N.B. Engraved for THE GARDEN from a water-colour drawing by F. Stainton.

of the southern sun, so that, for instance, the William Allen Richardson Rose is usually only in various shades of yellow, though in England it is said to be tinted red, and in the south of France is a most brilliant orange.

Kishorn, Ross-shire, N.B. MARY STUART.

A simple table decoration.—The too common practice of adding to tables florally decorated for competition some drapery material, not infrequently also of a somewhat killing colour, should be strongly deprecated. Too seldom do we see in combination with such aids good floral taste. I was very recently much pleased with a table easily placed first, the flowers used being solely those of *Lavatera rosea* and *L. alba*, the dressing being Fern fronds, sparingly used, *Gypsophila pauciculata*, and a very few grasses. The flowers kept fresh all the day—long, indeed, after other flowers had flagged. The harmony found in the combination was of the most pleasing kind, and whilst everything was simple and drapery of any description absent, the table yet stood a good way ahead of others shown in which coloration and drapery were mixed. Very recently I saw a table the only flowers employed being those of St. John's Wort, but on the cloth was laid some thin material of a rich florid yellow hue, which quite killed the flowers by contrast.—A. D.

throughout the winter. In March they will begin to move, and with plenty of air and heavy drenchings of water overhead every plant will soon be a mass of bloom. The fragrance of some of the varieties grown in this way is also a revelation. There are gardens in the south where, owing to drought or soil or some other cause, one never sees a Viola in its true character, but grown as above it may be had in perfection anywhere. The stout-legged, good-leaved varieties should be chosen. A good leaf and a good stalk mean a good flower, but it is the preliminary preparation that gives success—good soil, plenty of water, and a cool frame; shun fire-heat. Not a few hardy plants besides the Viola respond to the like treatment, notably the magnificent rosy *Spirea palmata*, which cannot bear sun or a dry soil, but, like the common Meadow-sweet, revels in coolness and moisture. In fact, all the herbaceous *Spireas* do well in pots if not forced too hard.

LAWN-MOWERS AND SWEEPERS.—The lawn-sweeping machine has taken shape at last, but "it may be dooted," as Jane Eyre's Scotch agent used to say, if it ever will become as useful as the lawn-mower. The first attempt at a sweeper was in the form of a hay-tedding machine, in which the besoms were attached to a skeleton drum and swept the rubbish into a receiver. The latest invention of the kind appears to be modelled

spadesman. I have seen a gardener, who was a martinet, stand at the end of a line of eight or ten young gardeners digging a broad quarter and shout like a drill sergeant if one of them happened to take a too thick slice before his spade, did not insert his spade straight down, or who could not use either hand foremost as might be required and turn the soil upside down in the true artistic style.

TOPIARY WORK IN THE PROVINCES.—Much as this kind of work has been condemned in general gardening, it is still practised more than might be imagined—not so much in gardens in the country, but in gardens in the suburbs of, or near, large towns. At the present time gardening is carried on with more spirit in these places than in many of our old and better known gardens, and such gardens are often extensive and usually well kept. Some have indeed been laid out by the best landscape gardeners with great taste, but where the personal fads of the owner come in we frequently find gardening of the grotesque order. In many cases it takes the form of clipped specimens, almost every Holly, Yew, Laurel, or plant that will bear the shears being trimmed into the stiffest of shapes. In one part of the suburbs of the “Steelopolis” and the “Cottonopolis” this kind of gardening has been contagious, and is evidently meant for show as much as anything else. In certain suburbs both evergreen and deciduous trees and shrubs, conspicuous from the road along which the wealthy citizens drive going or returning from business, are all shorn into the form of cones of different proportions. The general effect is rigid in the extreme, and it puzzles one to understand why such practices are tolerated by people who love Nature and beautiful gardens. One cynical individual suggested that the whole business was borrowed from the foundry, and the castings turned out there and transferred to the garden shrubbery. The practice is, perhaps, adopted thoughtlessly, but it is certain that the owners of such examples pride themselves upon their handiwork, as do also their gardeners, and it is not an uncommon thing to hear both in their respective spheres boasting of their formal Golden Queens, Golden Yews, Portugal Laurels, Laurustinus, and the like.

ALL LIGHT.—This is the title applied, I see, to a new style of fruit and plant house. Of the particular invention I know nothing, but since ever I remember all good gardeners have been striving to reduce the timber and iron in their glass structures with the object first of admitting the greatest amount of light possible to the interior, and secondly reducing the cost, and any design that promotes these ends should be welcomed. The first Crystal Palace of 1851 was all light and looked a fairy structure, and it was designed by a gardener. One has, however, only to look at the advertising pages of any of the horticultural papers to see how unteachable some of our horticultural builders are. “There is nothing like leather,” and with the hot-house builder, who is usually no gardener, there is nothing like timber. Only those engaged practically in plant and fruit culture realise how much is lost by every ray of light obstructed or lost in a house devoted to plants. I know a garden where a tall tree outside the walls begins to cast a shadow early in the afternoon over a long glass structure, the shadow gradually lengthening till the whole structure is in gloom. The effects of this tree on the inmates of the house have always been of the most marked description, the flowers becoming fewer and more inferior exactly according to the duration of the shadow. Creepers always suffer worst, being in permanent positions, whereas the portable plants can be changed from one side to another. Heavily-timbered plant and fruit houses produce the same bad effects. Where the rafters are deep and not far apart, the sun is off the plants not long after it passes the meridian, and that is all lost measurable energy. Why a builder should persist in making a conservatory with such cumbersome uprights and roofs, with the sides made up of frames glazed like windows,

involving wood and putty and paint and providing receptacles for dirt in every corner, is a problem. It is next to impossible to keep such structures clean inside. Sludge and dirt accumulate and set on the glass till it becomes obscured, reducing the amount of available light to a minimum, and necessitating much cleaning which can only be done with difficulty at any time. It is also in such houses that vermin find shelter and are worst. Let our plant houses be as nearly like a French cloche or bell-glass in principle as possible.

RAMBLER.

ORCHIDS.

COOL ORCHIDS.

At times during the present summer it has been difficult indeed to keep the cool house at anything like as low a temperature as is usually recommended. No matter how heavy the shading or how free the ventilation, the glass keeps going up, and at midday the house is like a stove. The air, indeed, entering the house through the ventilators is hotter than that inside, and when it is so the best way is to almost close the top ventilators, shade as heavily as possible, and admit air only through the lower side ventilators. Damping the floors and stages becomes an almost constant job, and it is well to lay some ordinary garden mats on the glass and damp these several times daily, as often as they dry in fact. This done, the house will be kept so that on entering the inside atmosphere feels cool and fresh after the hot sun outside, and is the best that can be done. Where the very coolest section, such as the New Grenadan Odontoglossums, the Disas, and cool Oncidiums, are placed in frames in summer, those left, such as Anguloas, Lycastes, Cymbidiums of the Lowianum and giganteum types, will find just the conditions they like, as will Odontoglossum grande, O. Schlieperianum, and various other autumn-flowering kinds that like a little more warmth than O. crispum, O. triumphans, and the allied kinds. If only for the additional room provided, the removal of the latter class is a great advantage.

After the end of the present month we usually get cooler nights, though during the day it is hot and bright, but the nights get longer and cooler conditions on the whole prevail. It will then soon be time to renew the compost of such as may require this attention. Some of the Oncidiums, for instance, that produce large scandent spikes, such as O. macranthum, O. serratum, and similar kinds, will be pushing their roots from the new growths, and both in order to protect these from insect attacks and provide them with nutriment the sooner these are covered with new material the better. All may not want repotting; with some it will simply be a little surface-dressing that is needed, but the sooner either operation is carried out after the tips of the roots appear the better, as they are not then so liable to be injured and the better hold they get on the new compost. In preparing the latter due regard must be had to keeping it open by the aid of crocks and charcoal, this being especially necessary when top-dressing. After the plants are done it is not advisable to keep the roots very moist, but as the new material dries much more rapidly than the old, it will probably be necessary to water quite as often as before. The plants that were top-dressed are the more difficult to manage, as sometimes the new material at the surface will be dry, while below it is quite wet. In doubtful cases the weight of the pot is the best guide. A comparatively dry state at the roots and a very moist atmosphere are more conducive to early activity of

the former than the opposite conditions. Roots, as a matter of fact, are put forth in search of moisture; they are not drawn out by it, and at first they need to be coaxed into the compost, as it were.

Far too little attention is given at this time of year to the cleaning of cool and other Orchids, damping, watering, and other details of culture taking up so much time. But if possible time should be spared for a thorough cleansing before the plants are potted or surface-dressed. Well wet the foliage before beginning to use the sponge, and after the plants are finished a light fumigation may be given on a still evening. Masdevallias especially should be carefully gone over to destroy yellow thrips, as these ruin the appearance of the blossoms of the showy-flowered section of the genus by the white lines they make all over them.

Cypripedium Sanderianum.—This is a very interesting Cypripedium that ought to be grown wherever these useful Orchids are liked. It is one of the finest of the Old World kinds, thriving under cultivation in a hot, moist house with a very substantial compost, the growth when the plants are healthy being very vigorous. The plant has broad, strap-shaped leaves and tall flower-spikes, the latter containing several blossoms, which are remarkable for their long, pendent petals. These are yellowish brown and purple, the same colour being repeated on other parts of the flower.

Oncidium pulvinatum.—The large trusses of flowers produced by this old species are very beautiful, and many rarer and more expensive Orchids are less worth a place. The pseudobulbs are a foot or upwards in height, and from these the flower-spikes spring. It is of the easiest culture, thriving in any moderately warm house in a rather rough and open description of compost. Keep the plants well up to the light and they will be far more free-flowering than if growing in dense shade, though of course the foliage has to be considered. Water is freely required all the year round, more, of course, being necessary in summer, when evaporation is rapid, than in winter.

Oncidium lamelligerum.—The flowers of this Oncidium are as striking and handsome as any in the section to which it belongs, the long twining scapes 7 feet or more in length having at intervals fine yellow and brown flowers of characteristic shape. The growth is fairly strong, and the roots, being large and fleshy, push most readily through a compost with which rough lumps of charcoal and crocks are freely mixed. Set the plants only moderately high in the pots, as then top-dressing may be easily done, this being oftener necessary than with kinds of a more tufted habit. It delights in a cool, moist house all the year round, and is rather more liable to insect attacks than most Orchids. Light syringings overhead help to keep these in check, especially thrips, and are refreshing to the plants.

Curious sport on Dendrobium nobile.—I noticed a very peculiar malformation of this Orchid the other day, a plant in a local collection having pushed up a young growth from the base, and being by some means checked had pushed its flowers in quite a whorl, or so it seemed until examined closely, when it was apparent that there were several little bunches of two and three flowers each. They were not perfect flowers, but they were not abortive, and the colouring was almost as bright as if they had occurred in the usual way. The check had evidently caused the premature ripening of the shoot and the flowers formed, the fluids pushing these up when they again became active. Such a thing would be likely to occur when using plants with immature growth for decoration when in flower.—H. R.

Epidendrum Brassavolæ.—The likeness to a Brassavola is at once seen in the pretty flowers

of this somewhat uncommon *Epidendrum*; the pretty purple tint on the end of the lip contrasts nicely with the yellowish tinge in the sepals and petals, and it is a pity the plant is not more grown. The habit is strong and a large number of flowers is produced on the tall, vigorous scapes. Its culture cannot be called difficult, but it will not flower freely unless grown in a house where ample light and air reach the plants on every side. The lightest position in the *Cattleya* house or a place with the Mexican *Laelias* will be suitable, this tending to a thorough ripening of the growth after the flowers are past and ensuring a free-blooming plant. Plenty of water is necessary while growing, and when at rest sufficient to prevent shrivelling.

NANODES MEDUS.E.

THIS is certainly a most peculiar Orchid to cultivate, plants in some places doing well under one system, in others under another, and even in the

neighbour. But it is, unfortunately, not always so, and do what one may the plant seems to get smaller instead of larger. It is always worth while to try the plant for a week or two in a rather higher temperature than usual to see if that will give it a start. As regards its growth and flowering, it is one of the most inconstant of Orchids, and usually there are growths upon it in all stages of development, some flowering, others half made up, and young shoots pushing from the base of those in flower. This being so, it is evident that nothing like a regular season of growth and rest can be arranged, but the plants must be kept moist at all times. Less moisture will be needed when the weather is dull and cold than when opposite conditions prevail, and all the year round the plants should be grown in a cool, moist, and shady house such as suits the New Grenadan *Odontoglossums*. The blossoms are very singular, and are produced in terminal racemes of two or three, seldom more, from the distichous-leaved pendent stems. They are

rough blocks with *Sphagnum Moss* about the roots.

TREES AND SHRUBS.

AZALEA VASEYI.

OF not merely botanical interest, but of great value also for the garden, is the handsome *Azalea Vaseyi*, one of the latest of North American discoveries in this line. Belonging to the *Rhodora* group, it appears to be more closely allied to the Japanese representatives of this group than to the American *Azalea* (*Rhodora*) *canadensis*, and is thus a new proof of the near relationship between the flora of Eastern North America and that of Japan. As late as 1878 *Azalea Vaseyi* was unknown until in the spring of that year it was discovered by G. R. Vasey, son of the well-known botanist, Dr.

George Vasey, in North Carolina, in the neighbourhood of Webster; since then it has been met with in other localities, not, however, outside the boundaries of the North Carolinas, and, moreover, only in two districts, viz., Jackson and Mitchell, where it thrives to an altitude of nearly 7560 feet. A report that it was also to be found in South Carolina was based upon an error.

Azalea Vaseyi is a handsome shrub, which in April or the beginning of May begins to put forth its blooms, not much later than those of *A. canadensis*, which, however, it far exceeds in beauty, not merely as regards the abundance and size of its blooms, but also in their tender rose-pink colour. A fair specimen of this shrub is to be seen in the Arnold arboretum. After twenty years this plant is now about 5 feet in height, yet shows no visible inclination to attain to the height to which in its native habitat it often grows, namely, 13 feet or thereabouts. This, however, may be accounted for by the fact that there it is found in close association



Azalea Vaseyi.

same house I have seen it in baskets next to each other, one plant dwindling away and the other doing well. I think a lot depends upon how the plants establish themselves during the first year or two they are in this country, for when a specimen takes a good hold of its basket and roots well into all the holes and crannies of the compost nothing seems to check it, and one may keep on watering and the plant grows freely. On the other hand, I have known plants of it that nothing will induce to root freely, and, of course, unless a plant is well rooted there is no use in watering it much, for the few roots can only take up a certain amount of moisture. Such specimens are best in the smallest-sized baskets they can be put into, and should have nothing in the way of compost but a little *Sphagnum Moss* and a few crocks. If they take hold of this the plant may be removed entirely to a larger basket, filling up around the old one with peat and Moss. By carefully watering this for a time the roots will find their way through it, and then it is only a question of time before the unhealthy plant becomes as good as its

usually about 2 inches across, the sepals and petals yellowish green, the lip broad and deeply fringed deep maroon-purple. They last a long time in good condition. H. R.

Dendrobium cucullatum.—Flowering rather later than *D. Pierardi*, this is useful in keeping up a display, and it is a very pretty and graceful Orchid when in bloom. From the long semi-pendent shoots the blossoms appear at intervals in short racemes of two or three, the colour being a soft mauve or rose on the sepals and petals, the lip yellow and white, with streaks of purple. *D. cucullatum*, in company with one or two others that make late growths, likes a position where in summer and early autumn it catches every ray of sunshine and the warmth is well maintained till the end of the season. Then the pseudobulbs are well developed to the point, and, being well rested after the foliage is off, flower abundantly along their whole length. The plant is not so strong-growing as *D. Pierardi*, and does best in pots or baskets of limited size or even on

with other and loftier growing vegetation and in greater moisture, whereas in the arboretum it has greater scope for lateral development. In European gardens this handsome *Azalea* is yet almost unknown. *Azalea Vaseyi* is in its native North Carolina a bush 13 feet or so in height with tall smooth branches. The blooms appear before the leaves in umbels of five or six, borne upon stems about a centimetre in length. Like the other hardy *Azaleas*, as *A. canadensis* and *A. viscosa*, it loves a moist situation. In all parts of Germany it is hardy. According to Herr von St. Paul, who owns an estate at Fischbach, in the Riesen Mountains, it has often been exposed to a temperature as low as 30° C. without hurt. As in all *Azaleas*, the bloom is most abundant on old shrubs, and the older these are so much the richer in bloom. This is particularly characteristic of the American kinds, in contrast to which *A. sinensis* blooms best as a young plant.

The foliage, as in most Azaleas, is not particularly striking, yet in autumn it acquires a dark red colour which is very handsome. The great value of *A. Vaseyi*, however, lies in its early blooming and in the abundance of its delicately coloured blossoms, and, furthermore, in its hardness. The flowers themselves appear to be little susceptible to night frosts, and I have never known them to suffer from this cause.—A. REHDER, in *Deutsche Gärtnerei Zeitung*.

The Spanish Broom (*Spartium junceum*).—In soils and positions where the ordinary Broom and its varieties are not a success, this may be tried, as it is more easily suited as regards soil and very free-growing and flowering. The blossoms are large and in colour a very bright clear yellow, a fairly large plant in bloom having a very fine appearance from a little distance. It should not be planted where hares and rabbits abound, or if planted it should be protected, but for the front of shrubberies or for making distinct bits of colour in the distance it is certainly one of the best of plants. As showing its free habit, plants of it here cut nearly to the ground-line during the present spring are now over a yard high and flowering. Propagation of this species from seeds is easy, and these are usually very freely produced after flowering. The pods should be gathered before they show signs of bursting and laid on trays in a warm, sunny place until quite ripened. Sow in autumn in fairly wide drills and the seedlings will appear in spring, when they may be left to grow into a thicket or be transplanted. Cuttings of half-ripened shoots root freely if covered with a handlight.—*Suffolk*.

JULY IN SOUTH DEVON.

THE past month has been a period of perfect summer weather. In the early mornings the waters of the adjacent bay were darkened by a cool air from the north-east, which, as the sun mounted the heavens, faltered and changed in direction, coming in fitful breaths from the south over the horizon-line that marks the open channel and gradually veering until, as the sunset hour approached, it blew crisply from over the western shore. Occasional local thunder-showers served to keep the grass fairly green and the hedges free from accumulations of dust until the closing days of the month, when vegetation at length began to assume a parched appearance. During July the corn ripened with great rapidity, many fields being harvested before the end of the month. Stretches of distant moorland and ledges of sea-girt cliffs are purple with blossoming Heather. The lanes are full of the luscious scent of the Meadowsweets that grow amongst the rank herbage which clothes their banks, interspersed with numberless wild flowers, lavender Scabious, yellow St. John's Wort, Bedstraw, Milfoil, Chicory, Crane's-bills, Enchanter's Nightshade, Agrimony, Rest-harrow, and a host of others. The Bryony's tangled skein wreathes the now flowerless sprays of Eglantine; the first Thistle seed, wafted by an impalpable zephyr, floats slowly down the winding lane, and the voice of the stream that laves the Sedges, amid whose seclusion the reed-warblers have reared their brood, is silent. Save for the screaming of the swifts, as they sweep with lightning-like speed round the old tower, ere circling aloft for their evening flight until they are mere specks in the clear sky, the occasional laugh of the green woodpecker or the calling of the brown owls from the wood on moonlight nights, the feathered tribes are mute. The blithesome time of singing birds is past—the time of budding branch and opening blossom—and Nature stands full-fledged and content calmly awaiting the next act of the drama—the pageant of her autumnal transfiguration.

In the rock garden *Acena microphylla* bears its long-spined crimson flower-globes, and in rich soil the stately *Acanthus* spreads its noble cur-

ing leafage of glossy green, surmounted by lofty purple and white flower-wands fully 7 feet in height. *Achillea ptarmica* fl.-pl. The Pearl is still bearing a profusion of its double white rosettes, and the Monkshood (*Aconitum Napellus*) is perfecting a second crop of flower-spikes. The blue African Lily (*Agapanthus umbellatus*) and its white variety are objects of great beauty where large clumps have thrown up a dozen or more great umbels of flower from the green sward. At the commencement of the month the hybrid *Alstroemerias* were in the zenith of their loveliness, the golden-orange *A. aurantiaca* being also very attractive, yet lacking the suave gradations of colour that are presented by a breadth of the hybrids, where the tints blend harmoniously one with another, ranging from palest cream to rich crimson, with half-shades of yellow, orange, and pink, and dark pencillings. These hybrid *Alstroemerias* should always be planted in masses and not singly, since it is only when the former method is adopted and patches 2 yards or so in length and half as much in breadth are formed that the association of the varied tints becomes really effective. *A. psittacina* has also been in flower, as has the white *A. pelegina alba*, sometimes called the Lily of the Incas, but this latter apparently does not possess the constitution of the before-mentioned varieties, since its growth has been feeble and its flowers few. Hollyhocks (*Althea rosea*) have generally done well this year, several collections that I have seen showing little or no trace of the Hollyhock disease. They are particularly handsome flowers for the back row of the herbaceous border or for planting where their flower-spikes are thrown into strong relief by a setting of evergreens. These are often seen growing vigorously in cottage gardens, where deep red or rose-coloured varieties are very effective when gaining the contrast of a whitewashed wall. Many of the double forms are massive and grand, but the singles with their simple blossoms are, perhaps, the more attractive. A single yellow, with deeply-cut foliage almost resembling a Fig leaf (*A. ficifolia*), is a very taking plant. Hollyhocks should be provided with rich and deep soil and liberally treated in the matter of liquid manure and mulchings, when they will attain a height of 8 feet or 9 feet. When in perfect health they have an air of robust comeliness that renders them most decorative in the garden. *Anchusa italica* is a handsome plant for the wild garden, the deep blue of its flowers being very telling. Its somewhat straggling habit and the comparatively small size of the blooms prevent its becoming a general favourite, though there is a form with flowers quite double the size of those of the type that is well worth a place in the border. *Anemone japonica alba* Honorine Jobert heralded the approach of autumn by expanding the first of its blossoms before the close of the month, and the white-flowered Pearly Everlasting (*Antennaria margaritacea*) produced its clusters of double blossoms. St. Bruno's Lily (*Anthericum Liliastrum*) and St. Bernard's Lily (*A. Liliago*) bore their spikes of white flowers, the former being by far the more effective, owing to the much larger size of its flowers, both in the border and when used for indoor decoration, though the scapes of the latter are graceful. The pure white *Antirrhinum* have borne a profusion of flowers, old plants two years old having formed quite large bushes. A fair proportion of the seedlings come true to colour, but, since this cannot be depended upon, it is always advisable to propagate from cuttings. Hybrid *Aquilegias* were at their best in June, but were still flowering in the early part of this month. *Armeria bracteata rosea* blossomed well into July, and the Prophet Flower (*Arnebia echioides*) produced its primrose-yellow bloom-heads with the deep maroon-purple spots on the petals that have the curious property of disappearing entirely after the blossom has been open a day or so and leaving the flower entirely yellow. *Arum Lilies* (*Richardia*) have been blooming freely where they are planted around ornamental water, and in some cases below the water level, and in exceptionally sheltered positions will carry blooms until the close of the

year unless unusually severe weather should set in. *Astrantia maxima* has borne its quaint double blossoms, and *Arundo conspicua* has produced its white plumes on their slender shafts. These latter are so frail, that if the plumes become saturated with rain before the shafts have attained their maximum consistency they break, and thus spoil the effect of the clump. This month during heavy rain, in an absolute calm, many shafts broke on a fine clump with the weight of their plumes. Tying and staking the shafts are, even if practicable, too inartistic a method to be pursued, and the only remedy is to cut out and remove the broken shafts. This New Zealand Reed is of far more graceful habit than the Pampas Grass (*Gynerium argenteum*), with which it is often confounded, but the latter has certainly an advantage in possessing shafts that are not so readily broken by the action of the rain and wind. In light soil in sunny gardens *Babianas* have been in flower, and the tuberous *Begonias* are week by week making a more effective display. The great Plume Poppies (*Bocconia cordata*), 8 feet high and more in good deep soil, are holding aloft their branching panicles of inflorescence, ivory-white and ruddy brown in colour, above their wide-spread scolloped leaves, blue-green on the upper surface and silvery white beneath, their reverses showing fitful gleams of light as the breeze momentarily lifts their edges. *Brodiaea californica* and *B. laxa* have been in bloom, and many of the *Campanulas* have brightened the garden with their flowers. In the herbaceous border *C. grandis* and its white variety, *C. latifolia*, purple and white, over 5 feet in height, *C. persicifolia* in all its forms, *C. lactiflora*, with the biennial Canterbury Bell (*C. Medium*) in varied colours, and the tall Chimney *Campanula* (*C. pyramidalis*) expanding the blossoms on its earliest flower-spikes. Of this species, the pale lavender variety, presumably a cross between the purple and the white forms, is perhaps the most attractive. Of the dwarf habit species and varieties, *C. carpatica* and its varied forms, *C. cæspitosa*, *C. pusilla*, *C. garganica*, *C. cenisia*, *C. isophylla alba*, which is used so extensively for hanging baskets, *C. Raineri*, and *C. G. F. Wilson*, as well as many others of the same family, have been in flower in various rock gardens. *Calandrinia umbellata* has produced its corymbs of magenta-crimson blooms, and is certainly one of the showiest of dwarf biennials. *Callirhoe involucrata* has borne its crimson flowers, and *C. Papaver* its violet-red blossoms.

The large-flowered *Cannas* are commencing their showy reign in many gardens, and the comparatively old *C. Ehmanni iridiflora* is bearing its arching bloom-scapes of cerise-pink. This *Canna* lives out through the whole winter in sheltered gardens where the soil is not too retentive of moisture. Carnations have given a lovely display in some places, two-year and three-year-old plants providing a multitude of bloom, while in other soils they are rarely satisfactory after their first season. The Cretan Mullein (*Celsia cretica*) has borne its tall yellow flower-spikes, and of the *Centaureas*, *C. macrocephala*, *C. babylonica* and *C. montana* have been in bloom, as well as the annual blue Cornflower (*C. cyanus*) and Sweet Sultan (*C. moschata*). *Chelone barbata* has borne its tall flower-spikes set at intervals with drooping orange-red blooms, and the larger-flowered dwarf form of *Chrysanthemum maximum*, styled *C. m. grandiflorum*, has expanded its wide star flowers, while *Cimicifuga racemosa* has perfected its long, pendent trails of snowy blossoms. Two bushy *Clematises*, *C. Davidiana* and *C. recta*, have produced their blossoms of pale purple and white respectively, and *Codonopsis ovata* has continued to expand its lovely but ill-scented flowers. *Convolvulus Cneorum* and *C. mauritanicus* have been in bloom, the latter exhibiting the most vigorous health and flowering profusely when planted between the stones of a retaining wall. *Coreopsis grandiflora* is a blaze of gold, and the white *Cosmos hippinatus* is already in bloom where seedlings have been raised under glass and subsequently planted out. Treated in this manner the plants come into flower at a comparatively early

date: whereas if the seed is sown in the open in rich ground the plants often attain a height of 6 feet before forming flower-buds, which are then not produced until October, when the weather rarely admits of their satisfactory expansion. *Crinum capense* and the deeper coloured *C. Powelli* have both opened their flowers, and one solitary bloom has appeared on a plant of *Cypella Herberti*, which, however, has never recovered the check it received by being eaten down level with the ground by a rabbit just as it was coming into good growth in the late spring.

At the commencement of July the *Delphiniums* presented a majestic appearance, many specimens being 8 feet in height and carrying numerous flower-spikes. Those with pale blue flowers are by far the most effective, the comparatively smaller-growing *Belladonna* being of a shade of blue hard to beat. *Cactus Dahlias* are daily becoming more decorative, and in a neighbouring garden *Desmodium penduliflorum*, also known as *Lepedeza bicolor*, has been in bloom. *Dianthus Napoleon III.* has produced a succession of its bright blossoms, and the Burning Bush (*Dictamnus Fraxinella*) has borne its many-flowered bloom-spikes. The white variety of this plant is more beautiful than the dark-flowered type, but it appears to be less hardy, as I have known it die out in not a few gardens. The blooming season proper of *Doreenium plantagineum excelsum* Harpur-Crewe passed away with the preceding month, but now and again a few giant golden stars are produced. The Globe Thistles have been distinctly ornamental, *Echinops Ritro* having borne numbers of its blue globular flower-heads, and the Rocky Mountain Willow Herb (*Epilobium obcordatum*) has been bright with its rosy blossoms. The common Willow Herb (*E. angustifolium*) is very attractive when seen growing by the thousand at some little distance in marshy spots, a space two or three acres in extent creating a fine colour-effect in the landscape. The Mexican Daisy (*Erigeron mucronatus*) is blooming as prodigally as ever, and *E. speciosus* is producing its lavender-gold-centred blossoms in quantity. This flower associates charmingly with the white *Gladiolus*. The Bride for indoor decoration, and another flower that lends itself to artistic floral arrangement is the metallic-blue Sea Holly, which when allied with the orange *Alstromeria aurantiaca* creates a charming colour contrast. Of these Sea Hollies, *Eryngium Oliverianum* is one of the best, and is often sold for *E. amethystinum*, which is rarely to be met with true in gardens. *E. Bourgati* is another handsome kind. The lovely steely-blue lustre on the bracts of the flowers when these have reached perfection is quite a unique colour in the garden. Great bushes of *Fuchsia Riccartoni* and *F. gracilis* are in full flower in cottage plots, and in the wild garden the white Foxgloves made a chaste picture at the commencement of the month, while the Plantain Lilies displayed their cordate leaves and inconspicuous flower-scapes. Of these by far the most effective is *Funkia Sieboldi* with its large cool-coloured, blue-green foliage. The *Gaillardias* are gay in their crimson and gold, and the *Galegas* have been clothed with a multitude of their Pea-like blossoms. The white variety is the most effective in the garden, but the mauve type is not unpleasing when used with pale yellow flowers for decoration. The tall Cape Hyacinths have held aloft their spires of pendent white bells, and are particularly effective when associated in the garden with the scarlet *Gladiolus brenchleyensis* or the deep blue of *Salvia patens*. Some of the lovely hybrids of the *Gladiolus Lemoinei* and *G. Nanceianus* sections have been in bloom, and the rarely seen *Gaura Lindheimeri*, 4 feet in height, has been studded with rose-flushed white blossoms. In a rock garden the Partridge Berry (*Gaultheria procumbens*) has been thickly set with its drooping white flowers, and the *Gazanias* make a show in many a sunny border. *Gentiana asclepiadea*, *G. cruciata*, and *G. septemfida* are all in bloom, as have been many of the *Geraniums*, and I noticed a plant of *Gerbera Jamesoni* in flower early in the month. The bright crimson

blossoms of *Geum coccineum* are still in evidence, and the charming *Gypsophila paniculata* has perfected its billowy clouds of flower-lace. *Helenium pumilum* is golden with bloom, the annual *Sunflowers* hang their heavy discs by many a cottage path, and the earliest of the perennial *Sunflowers* are already becoming yellow with flower. Old plants of *Heliotrope* that have passed through the winter unharmed are odorous with blossom, and of the Day Lilies, *Hemerocallis fulva*, *H. Kwanse* fol. var. and *H. aurantiaca major* are in flower, while the common St. John's Wort (*Hypericum calycinum*) has swathed a steep bank, 40 feet long and 15 feet high, with an evanescent mantle of gold, and *H. Moserianum* and *H. olympicum* are also in bloom. *Inula glandulosa* has produced its large, narrow-rayed orange stars, and in the wild garden the coarse-growing *I. Helenium* has borne its yellow flowers.

By the water-side the many-tinted blooms of *Iris Kämpferi* have created a striking effect in gardens where this manner of planting them is possible, and the tall *I. orientalis*, or *echroleuca*, with its white and yellow blossoms, and *I. aurea* and *I. Monnieri* with their rich golden flowers have formed a handsome picture. In the early days of the month a particularly beautiful variety of the English *Iris* was in bloom in a cottage garden, a pale French grey self. As far as I am aware this form is not mentioned in any bulb list, and personally I have been unable to procure this colour free from markings of a darker shade. *Jaborosa integrifolia* has continued to produce its fragrant white flowers in a sunny garden, and the *Kniphofias* have perfected their brilliant spear-heads of bloom. The Everlasting Pea (*Lathyrus latifolius*) is in full beauty, both the pink and white varieties being favourites with the cottagers. *Lavatera trimestris* brightens the garden with its blossoms of pink, white, and red, *Linaria repens alba* has been blooming in the rock garden, as have the golden-flowered *Linum arboreum* and *L. flavum*, while *L. narbonne* has displayed its blue flowers from the border. *Lindlofia spectabilis* has borne its clusters of purple flowers, and *Lychnis chalcidonica* and *L. Haageana* their vivid scarlet bloom-heads, while *L. diurna rosea* and *L. vespertina alba plena* have both been in flower. The true green-leaved *Lobelia cardinalis* has perfected its vermilion flower-spike long before the purple-leaved *L. fulgens* has expanded a blossom, and by the margin of ponds the Loosestrife (*Lythrum*) has borne its rosy purple flowers. The Musk Mallow (*Malva moschata*) is white with bloom, and *M. lateritia* and *M. Munroana* have been in blossom. *Matricaria inodora* fl. pl. bears its double white flowers above its Fennel-like foliage, and *Matthiola bicornis* (the Night-scented Stock) has produced its fragrant, sober-coloured blooms, while *Menziesias*, white and pink, have flowered, and in light soil in sheltered gardens near the sea the *Mesembryanthemums* have created an indescribable brilliance. *M. tenuifolium* is the brightest of all the genus, being of an absolute scarlet that gleams with dazzling effulgence in the sun. By a streamlet the *Mimulus* is bright with its yellow and chestnut, and where *M. cardinalis* is grown the crimson blossoms are most effective by the water's verge. The old-fashioned Bergamot (*Monarda didyma*), also known as Bee-balm, since in days of yore the interiors of the straw skeps were rubbed with it in order to induce bees to take kindly to their new home, has borne its crimson flower-heads. When naturalised in large masses this plant has an excellent distant effect. *Mediola geranioides* has produced its bright red flowers and *Morina longifolia* its crimson bloom-heads.

In ornamental water the *Nymphaeas* have been particularly charming, the pale yellow *N. Marliacea Chromatella* and the large white *N. M. alba* being perhaps the most beautiful of all. The sweet-scented Tobacco plant (*Nicotiana affinis*), although by no means attractive in the daytime, perfumes the warm twilight with its white star flowers and of the Evening Primrose, (*Oenothera marginata*, a sweetly fragrant flower,

E. speciosa, *E. Youngi*, *E. fruticosa*, *E. macrocarpa*, *E. pumila* and *E. Lamarckiana* have been in bloom. The splendid white *Ostrowskia magnifica* has blossomed well in some gardens, growing to a height of over 5 feet. *Oxalis flori-bunda rosea* is still bright with flower, as are many of the Tufted Pansies in situations not too burnt up; of these the delicately tinted Border Witch, the lavender-blue *Ariel*, *Sylvia*, cream-white, *Florizel*, lilac-blue, and *Pensée d'Or*, bright gold, are especially pleasing varieties. The Paris Daisies are covered with bloom, one enormous bush of the yellow form that has braved three winters in the open being a fine sight, while some of the Ivy-leaved *Pelargoniums* have also seen three seasons in the same site and are now covered with a wealth of blossom that stretches 10 feet or more up the walls of houses. *Pentstemons* are flowering, as are the herbaceous *Phloxes*. Of these by far the brightest is *Etna*, a variety even more effective at a distance than near at hand, the truest test of a good border flower. *Phygelius capensis* has produced its tall spikes of scarlet flowers, and *Platycodon grandiflorum*, *P. g. album*, and *P. Mariesi* have blossomed, while *Plumbago Lar-pentæ* has commenced to disclose the tint of its soft blue flowers. *Polemoniums*, blue and white, have also been in bloom, as has also *Polygonum capitatum*; while of the Poppies, the giant *Oriental*, the Iceland and Welsh, *Papaver pilesum* and the annual *Shirley* and single white *Opium* Poppies have graced the garden. *Prunella grandiflora* has borne its violet blooms, and *Pyrethrum*, single and double, have brightened the borders. Fair Maids of France (*Ranunculus aconitifolius* fl. pl.) have bloomed, as have the golden *R. acris* fl. pl. and *R. lingua* in shallow ponds. The double white *Rockets* have been odorous as ever, and the exquisite *Romneya Coulteri* has borne its large, white, crêpe-like blossoms with their central boss of golden stamens and their delicious fragrance. *Rudbeckia purpurea* and *R. Newmani* are in bloom, and *Scabiosa caucasica*, *S. lutea* and *S. elata* are flowering, as are *Scutellaria alpina*, *Sedum album*, *Senecio pulcher* and *Sidalcea Listeri*. In the rock garden *Silene alpestris* is a mass of minute white stars, while in a sheltered border *Sparaxis pulcherrima* holds its drooping bells poised on slender arching shoots 6 feet in length. Of the Meadow-sweets, *Spiraea Aruncus*, *S. palmata*, *S. venusta*, *S. filipendula* and *Astilbe japonica* have been in flower. *Statice latifolia* has commenced to bloom, and the *Tigridias* in various colours have expanded their glorious Orchid-like blossoms. *Telekia speciosa* in the wild garden is bearing its yellow flowers, *Thalictrum aquilegifolium* was in full beauty at the commencement of the month, and *Tradescantia virginica*, both in its purple and white varieties, is still in bloom, as are the Globe Flowers (*Trollius*). *Tunica Saxifraga* is blooming in the rock garden, and *Verbascum phoeniceum*, *Veronica Lyalli* and many of the *Yuccas* are in flower, while of annuals the beautiful Sweet Peas in all their delicately tinted new varieties, the *Salpiglossis* with its wondrous shot-silk hues, and scarlet *Zinnias*, that already make a breadth of bright colour in the border, and the deep blue *Phacelia campanularia* are amongst the most attractive. S. W. F.

Two new Richardias.—*Richardia Nelsoni* is a vigorous plant 30 inches to over 3 feet high, the erect scape rising a good deal beyond the leaves. These are arrow-shaped and a deep green, marked on the surface with pellucid stains, as in *R. Elliottiana*. In colour it is pale yellow, with a broad purple stain at the base. This species, which seems to be vigorous and free flowering, nearly resembles *R. albo-maculata*, figured in the *Botanical Magazine*, t. 5140 (1859). *Richardia Adami*, distributed by M. Max Leichtlin in 1898, is a strong-growing form, with arrow-shaped leaves of a handsome, brilliant green. The spathe, which is shorter and more open than in the foregoing species, is white, and is likewise marked with a broad purple stain at the base. The species

is quite distinct, nor can I connect it with any other. It appears to be really new. Less decorative than *R. Nelsoni*, it is yet interesting for its vigour and the colour of its blooms.—M. MICHELI, in *Revue Horticole*.

Euphorbia splendens.—As a rule in most private gardens there is a plant of this old stove flowering shrub, but usually of a poor variety. There is a great difference in the flowers of these and the better larger forms, and although when badly cultivated and starved the latter almost sink to the level of the former, they are quite distinct. The growth of the variety *grandiflora* is stouter with paler bark than that of the old kind, while the blossoms occur on larger corymbs and are brighter. It is in bloom nearly all the year round, and if a specimen can be planted in an out-of-the-way corner of a stove or warm greenhouse, there is usually a flower for a button-hole when other blooms are scarce.

FERNS.

FERNS ON CORK.

VIRGIN CORK may be used in various ways. It is the best material for growing all the Stag's-horn Ferns on. Pockets may be formed which hold some soil and Moss, and when the young plants are fixed on these they do better than when grown on wood or tree stumps, where they do not get so much soil to root into. Although under favourable conditions these will subsist entirely on atmospheric moisture and the decaying basal or shell-like fronds among which the roots spread freely, by providing a little suitable compost for the roots to penetrate into it is much easier to keep them in a healthy, vigorous state. Many other Ferns may also be grown in these cork pockets. *Asplenium caudatum* and *A. longissimum* do well, and when hung against a moist wall their long drooping fronds are seen to the best advantage. The pockets should be made as large as possible for these, and any openings may be stopped with *Sphagnum Moss*. I find if treated well the above do better than when grown in suspended pots. *Adiantum Edgworthi* (ciliatum), *A. caudatum*, *A. dolabriforme*, and *A. lunulatum*, also any of the *Capillus-veneris* section, do well. Most of the *Davallias* are particularly adapted for the purpose, also the *Nephrolepis*, and many others might be enumerated. Where shady walls have to be covered, a suitable selection well arranged is most effective. In making the pockets, broad, flat pieces should be selected to form the backs, and the cup or pocket may be formed with pieces that curl round more. In using up a bale of cork, pockets of various sizes will have to be made, and these can be used for the various Ferns according to their habits of growth, but even if small plants of the large-growing sorts are used, large pockets should be given, as there is not much danger of over-watering, and it is not so convenient to transfer them to larger sizes as it is to repot from one size to the other. A similar compost may be used as is given for the various sorts when grown in pots. I like to use *Sphagnum Moss* for all. In joining the cork there are sure to be some spaces which require stopping, and by using *Sphagnum* a certain amount of moisture can be kept up without risk of the soil getting sour. In filling the pockets, care should be taken that the soil is well worked into all the narrow crevices.

If well managed, many Ferns will do much better in these pockets than when grown in pots, besides which they can be given positions where they are seen to the best advantage. Cork may also be used for forming stems, using wood for a foundation. The stems may be

made of any size, and being hollow in the centre more soil can be used than when tree stumps are employed. For the larger stems a flat board 4 to 6 inches wide may be used. A fillet should be firmly nailed on either side. The width will depend upon the height the stem is to be made. It should be broad at the base and fixed firmly to a broad flat board. In covering the woodwork the cork can be selected so as to form pockets at various distances, and the cork can be nailed firmly to the wood, or wire may be used to fix the cork where the nails will not reach the wood. Stems that are intended to be moved about should be made more than 5 feet high, and these should be at least 18 inches square at the base. To avoid making them too heavy the larger spaces may be partly filled up with any rough light material. The coarse siftings from peat will answer the purpose well,

for a few days. It requires care in watering to start with, as some of the balls may dry while the surface appears moist, but after the roots have well penetrated there will be little difficulty, and in most instances Ferns treated in this way will give less trouble than when grown in pots.

A. HEMSLEY.

GARDEN FLORA.

PLATE 1235.

CHIMONANTHUS FRAGRANS.

(WITH A COLOURED PLATE OF *C. FRAGRANS* VAR. *GRANDIFLORUS*.)

THERE are two virtues in particular that belong to this plant and its varieties; these are the date at which it flowers, and the exceptional



Flowers of *Azalea Vaseyi*. (See p. 119.)

but they must be pressed in firmly and care taken that all the spaces are filled to prevent the soil falling away from the roots. Smaller stems may be made by using a single piece of wood to fix the cork on, or tree stems covered with cork may be recommended. I have seen the smaller stems fixed in pots, but I prefer a wooden base for all sizes, as there is no danger of breakage. It must be understood that they all require firmly fixing, for the weight is considerable when filled and watered. If there are a few cracks or crevices open they should be filled with moss, and if this does not grow, the roots of the Ferns will penetrate and hold the soil together after they are well established.

For the large stems various Ferns may be used, and small plants of *Ficus repens* help to make a nice groundwork. In filling the stems it may be necessary to disturb the roots of the Ferns, but they will soon recover if kept close

charm of the perfume of its blossoms. The first flowers are open as a rule in December, often even in November, and they continue to appear till February or, it may be, March. In the strictest sense of the word the flowers are not showy; still, they are very pretty, especially for the season at which they appear, and, what is perhaps more pleasing, they diffuse around them one of the most delightful of flower perfumes.

The species, the finest variety of which is now figured, is a native of China, and was introduced to Europe in 1766. It is sometimes called the Japanese Allspice, but although it has, like so many of the finest Chinese plants, been long cultivated in Japan, it is believed not to be a true native of that country. It belongs

* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



to the same family as the Carolina Allspice (*Calycanthus floridus*), but its leaves and bark have not the same aromatic fragrance. The *Chimonanthus* is represented in gardens by three forms: there is the one now figured, which has the largest flowers and is known as *grandiflorus*; there is the typical plant, whose flowers although smaller are more fragrant and have the base of the petals more distinctly marked with purplish-brown; and, finally, there is a third and rarer form known as *luteus*, which is, I believe, at Glasnevin and whose flowers are more purely yellow than any. As a rule the shrub is quite leafless at flowering time, but the leaves are lance-shaped, 3 inches to 5 inches long, drawn out to a long fine point, of a very lustrous dark green, and curiously rough to the touch on the upper surface. Near London it is perfectly hardy as a bush in the open, but I have never seen it so charming as when grown on a wall. In the freedom of its flowering there is no comparison. When grown on a wall the shoots should be pruned well back, any weak shoots removed, and whatever re-nailing may be necessary done towards the end of February. The new growths ought then to be allowed full freedom, and no further pruning or tying done till February again. The object should be to obtain strong shoots of good length and not so crowded as to prevent their thorough ripening. Such branches when in bloom are very charming for cutting and associating with sprays of some evergreen like the common *Malonia*. This plant is one of the most difficult shrubs to propagate by cuttings. I have heard a story that Dr. Lindley when connected with the Horticultural Society's garden at Chiswick made a standing offer of a guinea for a rooted cutting, which he never had to pay. Still, cuttings have been rooted. It can be increased by layers or by seed (which it not infrequently produces in this country). For the named varieties layering will be necessary to get them absolutely true.

It is to the old walls of long-established gardens that this shrub seems more particularly to belong. Claremont, Glasnevin, Belvoir, all have noteworthy specimens. Newer establishments, I fear, often ignore it. One reason for which, perhaps, is that there are more claimants for wall space now-a-days than there were sixty or eighty years ago. Yet there is nothing more delightful than to meet with this and similar old things that have grown where they now stand almost since the days when first they reached this country. There is an additional pleasure to be got from trees and plants beyond the gratification their size, beauty, or fragrance give, which comes from a knowledge of their history and the associations that cluster round them. The name that one associates most with the present plant is that of Engelbert Kämpfer. He was one of the first naturalists who travelled to the far East. Japan he visited 200 years ago, and he was one of the first to make known the floral treasures of that country to European eyes. He was the first to figure and describe this shrub in his "*Amoenitatum Exoticarum*," p. 878.

CHIMONANTHUS NITENS.—Till within quite a recent date the genus *Chimonanthus* was supposed to be monotypic. Within the last few years, however, a second quite distinct species has been discovered in Ichang, China, by Dr. A. Henry. Professor Oliver named it *C. nitens*, and it is described as a shrub 5 feet to 6 feet high, with white flowers three-quarters of an inch across. The foliage appears to be similar to that of our cultivated species. This new species is not yet in cultivation, but it is interesting as an indication of the wealth of new plants which

await discovery and introduction in the central and western parts of China. W. J. BEAN.

THE WEEK'S WORK.

HARDY FRUITS.

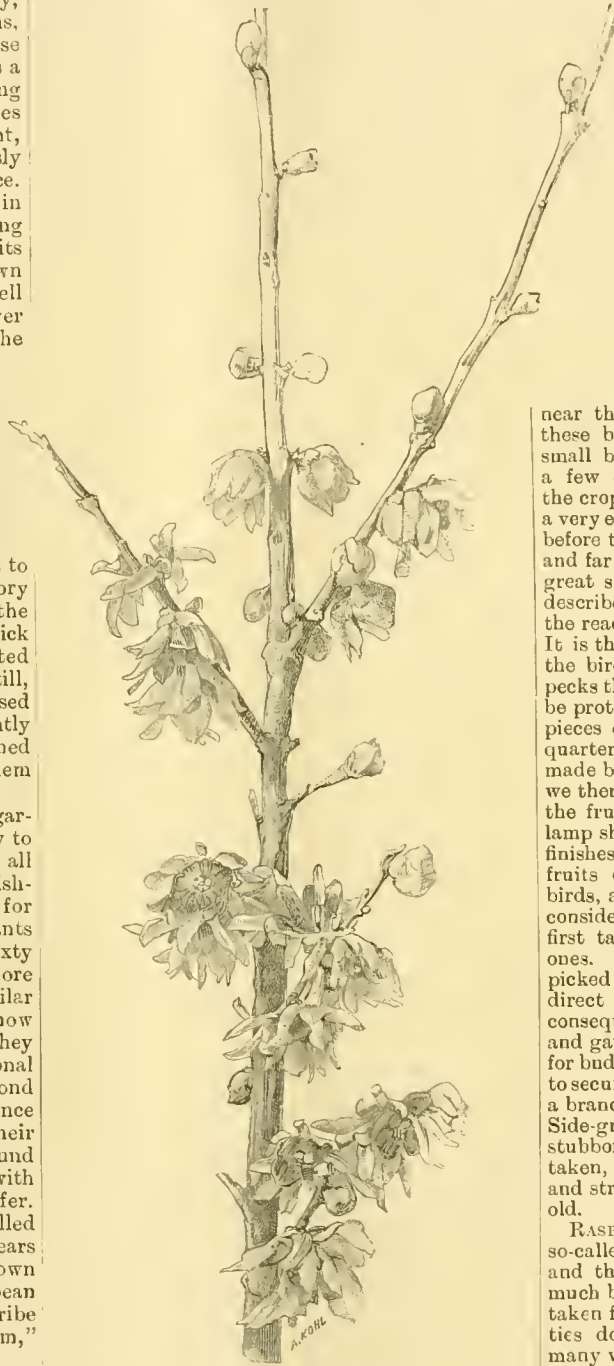
APRICOTS.—It should not be forgotten that the Apricot is a moisture-loving tree, and attention

from the soil, without any further assistance than that given by the natural fall of water, which is generally inadequate to the requirements of trees, especially those grown on walls. Occasional soakings of the soil, accompanied by frequent drenchings of the foliage, are quite the best things that can be given to ensure healthy and fruitful trees, and many people who have to bewail the fact of non-success in Apricot culture would be agreeably surprised with the result of giving more generous treatment in the way of affording moisture in dry seasons.

PEARS.—To Pear trees on the Quince stock the notes above dealing with Apricots will apply with equal force, for the Quince is equally a lover of moisture and cannot exist without it. It cannot be doubted that the fruits of Pears on the Quince are, except in rare instances and with some special varieties, much finer than those grown on the free stock, but they must be well supplied with water to attain both size and quality, and those who are not prepared to go to the trouble of giving it in plenty had better leave the Quince as a stock severely alone, except in soils that are naturally moisture holding. In many gardens the titmice do great damage to Pears by pecking holes

near the stalk of the fruit, a very trying habit these birds have, for they consume such a very small bit of each fruit and visit so many, that a few of them are sufficient to spoil most of the crop. To circumvent these and other enemies, a very elaborate protection has lately been brought before the public, but there is an equally efficient and far less costly method which I have used with great success, and which I will here attempt to describe, as its simplicity brings it well within the reach of all who care to preserve their fruits. It is the base of the fruit only which is attacked, the bird clasp the stem with one foot while it pecks the holes; consequently only this part need be protected. This is done by cutting out circular pieces of tough brown paper, folding these into quarters, then cutting off a small bit of the corner made by folding, and slitting up one of the folds; we then have a protection which can be placed on the fruit and drawn into shape something like a lamp shade. A pin thrust into each of these caps finishes the work, and with these on the best fruits one need not fear the attentions of the birds, and the danger of attacks from wasps is considerably lessened, as these latter get their first taste of the fruit by finding out the pecked ones. Some of the earliest Pears require to be picked just at the right moment and eaten almost direct from the tree to have them at their best, consequently they require to be well looked after and gathered as they ripen. This is a good time for budding Pears, and budding is the best method to secure growths on any portion of the stem where a branch is needed to keep the balance of the tree. Side-grafted pieces of wood frequently become stubborn and fail to furnish, but once a bud has taken, one can be pretty sure of getting a healthy and strong growth, provided the stock is not too old.

RASPBERRIES.—Personally I like to confine the so-called double-bearing Raspberries to one crop, and that the autumn one, as I think we get a much better crop then than we do if one has been taken from last year's canes, so I cut these varieties down to the ground in spring. There are many who still allow the two crops to form, and in cases of this sort no time should be lost in removing all last year's canes which have now done fruiting and securing the young canes to the wires or whatever support is provided for them; they should also be well fed with liquid manure on every possible opportunity, as Raspberries enjoy and well repay for good feeding. There is a great difference in opinion as to the wisdom of removing the old canes from the ordinary summer-bearing Raspberries directly the fruiting period is over, but I incline to the opinion that no harm is done by leaving them for a few weeks longer, and that



Chimonanthus fragrans.

to this fact after the crop is gathered is important in plumping up the fruit-buds for the ensuing season, the result being fine blossoms, which are more capable of resisting the weather influences than are those of a more flimsy nature. Too often no account is taken of the trees after they have yielded their crop, and they are allowed to languish for the remainder of the summer, at a time when most of the moisture has been drawn

they form some sort of protection for the young and tender canes. The best ways of dealing with them would be either to leave them or only to remove a few at a time, so that the exposure may be gradual. If the plot has been netted over, the net should be taken off before the points of the young canes push their heads through it. It is no uncommon thing to see quite a struggle between the nets and the shoots at the end of the season through neglect in taking off the nets as soon as the crop is over, and the canes are frequently injured by the defoliation of their tips which then takes place.

BLACKBERRIES.—These promise to perfect an enormous crop here, and will be much appreciated if they come up well; consequently they are being well fed during the drought; and one of the results of this feeding is to produce new canes of enormous length, and which it will be necessary to secure from injury by fastening them back to the wood fence on which they are growing. There is no doubt that these Blackberries are a very paying crop where they do well, but my experience is that they only do so on a soil that is inclined to be heavy. On a light soil I had great difficulty in keeping them alive.

WOODLICE.—In my recent notes on pests to fruits I did not allude to the woodlice, but these often do much mischief among Nectarines and Peaches in some gardens, and should be trapped persistently by using small pots loosely filled with dry moss covering a piece of freshly-cut Potato, and placed among the branches and on the ground at the foot of the wall. These pots should be examined every morning and cleared of the insects. If there are any earwigs about, these pot traps answer the double purpose of catching these as well as the woodlice. CORNUBIAN.

KITCHEN GARDEN.

GENERAL WORK.—Although the general absence of rain will have prevented the growth of weeds, the Dutch hoe must be used frequently between growing crops, this moving of the surface being very beneficial during tropical weather, especially where the soil is liable to get into a caked condition; it also preserves the moisture. Now is the time to give Broccoli and the various sorts of Kales that have become established liberal supplies of liquid manure, the same remarks applying to Peas, dwarf and runner Beans, Vegetable Marrows and Celery. In exposed gardens it is always a good plan to earth up such things as Brussels Sprouts, Broccoli and general winter stuff, as this not only steadies the plants and renders them proof against high autumn winds, but the ridge of soil acts as a mulch and keeps the roots in a moist, growing condition. Acting on the maxim of better late than never, mulching moisture-loving crops, such as late Peas, Beans, ridge Cucumbers and Marrows, should, if not already done, at once be performed. One good soaking over a good mulch will be of greater benefit to such subjects than two or three administered on the bare ground. Mulching is always regarded as so much wasted time in the vegetable garden, whereas in reality it is a great economiser and saves no end of worry. Only those who have been accustomed to cater for a large kitchen know the value of early mulching, copiously watering and closely picking such exhausting crops as those above named. By mulching alone on hot soils can they be induced to bear till frost cuts them down and other early winter crops take their place. Nothing pays better for liquid manure and plenty of it than Globe Artichokes. The best way is to form a kind of basin around each stool by means of short manure, so that the roots get the benefit of every drop of water which leaves the cans. Remove all seed-heads, as they have an exhausting effect on the plants. In midland and northerly gardens from the 10th to the middle of the present month is a good time to make the first sowing of Turnips intended for winter use. Were I confined to one kind only, I would choose the old favourite Chirk Castle Black Stone as being the most hardy and

best doer generally. Orange Jelly is also good for autumn use where a yellow flesh is not objected to. If former advice was carried out and advantage taken of the clearance of summer crops to prepare the ground, it ought now to be in good condition for receiving the seed. The broadcast method of sowing is the best, distributing it not too thickly, a surface sowing of guano or some other approved fertiliser being given as soon as the crop is fit for thinning. I recommend a second sowing to be made about the first week in September, as when once established, Chirk Castle will even during frosty weather increase slowly in size and prove most useful in spring. Where the soil is light and strong, it is a good plan to run the garden roller over the surface after sowing. Keep a sharp watch as soon as the plants appear, as should September turn out hot and dry, fly will sometimes put in an appearance even at this advanced date. Dusting the plants over with lime and soot or wood ashes will check the pest and also assist the crop to make a free growth. The most open position need not necessarily be selected for this crop, as Turnips will succeed even in the partial shade of trees.

MAIN-CROP COLEWORTS.—If the date recommended in a previous calendar, namely, July 7, was adhered to for sowing the principal lot of hardy Rosette Coleworts, they should where rain has fallen now be in a fit state for transferring to their permanent positions. I consider this crop well worth any extra care to ensure for the plants a good start, as nothing, so far as my experience goes, stands a trying winter so well. Besides, after a few brisk frosts in November their tenderness and good quality are equalled by those of few other winter greens. Being small they may be planted from a foot to 15 inches apart all ways, and there is very little waste in preparing them for cooking. As, however, no time has as yet been lost, if the ground intended for their reception is insufficiently moist a week or so more may elapse before planting takes place, always, of course, provided the young plants are not crowding each other or are overgrown. As previously stated, I have always made it a rule to plant vacant plots from which Strawberry plants have been cleared off. I find that in the solid root-run the plants if lifted from the seed-bed carefully and put in with a trowel speedily become established, and evaporation is less speedy than in ground recently turned up with the spade. After watering home, it is a good plan to draw a little fine soil round the plants with the hoe. This encloses the moisture and prevents a caked or cracked condition. Any early batches just commencing to grow must be occasionally treated to supplies of liquid manure, nothing responding so quickly to this stimulant as Coleworts.

SOWING TRIPOLI ONIONS.—As a rule, from the 15th to the 20th of this month is a good date to get in seed of the various sorts of Tripoli Onions, and if the site was prepared a few weeks ago so much the better, as a firm root-run is one of the surest guarantees of a satisfactory growth both in autumn and spring-sown beds. Beware of thick sowing, as the removal of so many young plants loosens those which are to remain; consequently they get blown about by autumn winds and crippled by frost at the base. After the seed is sown sprinkle a liberal supply of burnt refuse or wood ashes in the drills previous to filling in, after which tread and re-tread, and on light soils use the garden roller. Those who require bulbs early next season should sow the small but useful old White Queen, which does its work in a much less time than other sorts, and is very mild and agreeable in flavour. There are also several varieties of the ordinary Spanish type well suited for autumn sowing, often surviving a sharp winter even better than the Tripolis, Trebons and Cranston's Excelsior being amongst the best. Those who are likely to require small Onions in autumn for the salad bowl had better sow a row rather thickly for the purpose.

SPRING-SOWN ONIONS.—The last cleaning by means of hand-weeding should now be given to spring-sown beds, also one more broadcast

sprinkling of artificial manure. This will carry the crop on to maturity. If any of the bulbs have thick necks, go over the bed with a wooden rake and bend down the tops to check the flow of sap and assist in swelling out the bulbs. These, after storing, must be used first, as they never keep so well as bulbs with thinner necks. On wet days the Onion and root rooms generally should be thoroughly cleared out and made ready for the present season's produce. Onions always keep best where a free current of air can pass through the bulbs; anything approaching a heated condition is ruinous. J. C.

AN ADDITIONAL PAGE FOR "OUR GARDENS." *

THERE is one aspect of a garden which is not always dwelt upon, but which seems to me as important as any other, or I might even go so far as to say it is the most important of all—in point of interest it cannot be exceeded. I refer to its fitness for becoming a receptacle for the mementoes of absent friends, or the reminders of bygone days, or the vivid remembrancer of places that are far away. All this must be intelligible enough when once it has occurred to the mind, but the pleasure that comes from it—the bright, sparkling satisfaction—cannot be estimated aright until it is fully known. My garden is to me like an open book, full of pages which are dedicated to friends who are with us still, or who have in some instances passed away, or it brings before me scenes in my life which nothing else can freshen up in at all the same degree, and makes them live again in a way which nothing else can do; and the reason for all this is very plain—it comes from those laws of association† in the mind on which we act, it may be insensibly, but still inevitably every day of our lives. If I may prose for a minute or two I would say that there is such a thing as a law of succession in the mind, and also a law of co-existence, which move us powerfully. If we have been in the way of seeing two things together, the mere presentation of one will suggest the other; or if one thing has followed another, then the occurrence of the first will be sure almost to bring before us the existence of the second as by a sudden flash. I need not dwell on this, but it certainly is the groundwork of all which I have to say on this head about the garden I love, and plants and flowers in a very remarkable degree lend themselves to the sort of suggestion I am now speaking of. Anything about which you have to take trouble always has a voice for you which nothing else possesses; and because flowers come and go—and they are with us at one season and we lose them at another—they speak to us when they reappear with a

* Soon after this paper had been completed I came across the following interesting passage in "Our Gardens," by Dean Hole, p. 285; it exactly expresses what I have endeavoured to say at greater length. It runs thus: "Some arrange in a quiet nook their memorial garden in which they are happily reminded of their friends who have planted or sent to them shrubs or flowers, and also of the places, some of them far away, from which they have brought the same souvenirs—the sweetest and prettiest of all. Such associations of our friendships and admirations of those we have loved the best, and of the scenes which have charmed us the most, with a life of beauty which endures for ever, keep the memory of our attachments ever green and our faith in the future always strong. There is a touching and a teaching pathos in a record by Alphonse Karr: 'I had in a solitary corner of my garden three Hyacinths which my father had planted. He died before they came into bloom, but now every year the period of their flowering is to me a solemnity, a funeral and religious festival.'"

† See Dr. McCosh's treatise on "The Association of Ideas," page 6.

distinctness which they certainly would not have if they were with us at every season of the year. Let anyone busy himself about the cultivation of some particular flower, and take pains about it, and give his mind to it, and use all the means he can think of for ensuring its success, and then it is quite certain when that flower comes into blossom and is seen just once in the year in all its pride and beauty, that slumbering associations will be instantly waked up, and absent people and things will live again for us for a little space, as they could not possibly do if no reminder were given to us. I love beyond everything to walk about carelessly in my garden, and very often in some secluded nook, or in some well-dressed border, or in some little compartment of the rockery to light upon a gem which is valuable not merely on its own account, but because of the voice it has about people and places which live for me and ever will live deeply engraven on the tablets of my mind.

But some concrete instances will bring all this out in a way which no theorising can effect. Let me speak of a few places and then of some persons out of many which are suggested to me from time to time by the treasures of which my garden is full. A long time ago—five and twenty years it may be, or even more—I was able to carry out the dream of my youth and to visit Palestine in the spring. The month of April is the season of all seasons for a visit to the Holy Land, and I saw nearly all the spots of most sacred interest and which are usually visited. All the way through I had one great desire in my mind, which was to procure the seed of some interesting plant or plants and to bring it away with me, but I was there so early in the year the time of harvest was not yet, and I had almost given up my quest as unavailing when one day as I sat beside Jacob's well, and must have been at the very spot which the Saviour of the world had visited, I espied an *Anemone* seeding in a most unmistakable manner and just giving to me the opportunity for which I was looking. It was the only one which I met with in Palestine from first to last, and it was speedily and avariciously embraced. The seed soon found its way into a small receptacle which was kept in my waistcoat pocket, and was treasured up and brought safely home to be used in due time. There is, luckily, not the smallest difficulty in growing *Anemones* from seed, and this did so well that I soon had quite a large crop of *Anemone coronaria* and fine specimens on hand. Some of these were given away and some were kept here, but for a long term of years, when *Anemone coronaria* came regularly into blossoming, I could fancy myself, and I did fancy myself, once more in the vicinity of Jacob's well, and that memorable scene—one of the only two or three which can be identified with absolute certainty in the land—lived again before me with a clearness which nothing can obliterate, and which lasts while life lasts with me. It is, of course, true that the first succession of *Anemones* were itself out and then passed away, and in altering the beds my gardener was not quite so particular about the matter as I should have liked him to be, but the lineal descendants of the one plant in Palestine which I saw in seed are, I believe, with me still, and the Saviour's blood-drops, as they are so expressively called, suggest to me very much more than a mere patch of red, and they quicken thoughts which only a journey to Palestine can give, and which are best kept alive by some reminder of it. Or, to take another instance, though not from the Holy Land. The greatest shave which I ever had in my life was in visiting the temples at Poestum

—those magnificent Doric temples which once seen can never be forgotten. They stand alone on the solitary beach without a vestige nigh of any power that could have reared them, and they look almost supernatural in their splendid magnificence. Their grandeur, their gloom, their size, their isolation make an effect upon the mind surpassing anything I have seen before or since. It is not now either difficult or dangerous to visit these temples. The railway takes you within five minutes of the spot where they are situated, and there are signs of human habitation not far off, which proclaim safety at once. But it was a very different thing some thirty or thirty-five years ago. There was then not a more blood-stained spot than Poestum through the length and breadth of Italy. It was the favourite haunt of banditti, and dark deeds were done there which are remembered to this day. It was my fortune to go there on one occasion when things were at their worst, and so little did I realise that there was any special danger at Poestum, that I spent a great part of a day there wandering about inspecting the temples and looking for flowers without any misgiving of any kind. But that very day the brigands were at work in the place; one of their most notable captures was made, and the unfortunate victim was raced about over the mountains of Italy for three long months, and, finally, he had to pay an enormous sum for his ransom. Why I got off so easily I could never exactly tell, but I must either have been unnoticed or else held to be too small game for their attentions, and so they left me alone. But the mere mention of the word Poestum brings not *Roses* but *Asphodels* to my mind. I never came across a single *Rose* in Poestum, but *Asphodels* and *Cyclamens* abound there on every hand. When I paid a second visit to the temples the other day I came across them by hundreds, and *Asphodelus ramosus* is to me a kind of memorial of my escape beyond everything else. It has grown well and easily in my garden for many years last past, and I sent home some the other day which travelled safely by post and are flourishing here. I have come across the plant on the hills around Baalbec, but it has more to do with Poestum in my mind than any other place, and its pretty white blossoms with a reddish white line in the middle of each segment, which spring from the axils of large bracts in very long racemes, spell the word "preservation" for me in a way which nothing else can do. The ground all around the Temple of Neptune is simply carpeted with *Asphodels* and *Cyclamens*, and they grow there without any interruption from generation to generation. But as long as I live so long will *Asphodelus ramosus* be a plant of the greatest interest in my eyes. It would not be difficult to dilate on the beauty and luxuriance of Banksian *Roses* during the month of May, but they are nothing here when compared with the freedom and the delightful abandon with which they grow all over Athens, and Athens is as though its chiefest glory, the Parthenon, were brought full into sight. Banksian *Roses* are always connected in my mind with the place where I have seen them at their best. They seem to quicken a remembrance which else might die out of itself, but which is freshened up and revived, so to say, by a yearly reminder. Let me notice only one plant more which has a very great attraction for me. This is

CAPPARIS SPINOSA,

which is not a child of civilisation at all. It eschews the haunts of men, but in the south of Europe and some parts of Asia Minor, and,

it may be, in other places wheresoever desolation has set its seal and everything seems given over to aridity and death, there it is wont to luxuriate and grow, and it flings itself over broken arches and streams along the empty colonnades, and grows out of the dry wall as if it positively chose out some woebegone spot rather than were in the habit of seeking for any fertility at all. I consider it to be one of the most beautiful of flowers. The large white cup with the long purple stamens and long-stalked ovary has a kind of plaintiveness about it, and it is in the very strictest harmony with the surroundings which it loves to adopt. I have generally had this plant in my garden during the last twelve or fifteen years and I have it still, and now and then it has blossomed, and there are few things on which I set greater store than I do upon it. For does it not tell of places and of buildings whose interest cannot be surpassed? It loves, for instance, the Palace of the Cæsars in Rome; it grew luxuriantly in the old Colosseum; and beyond everything else I have seen it quite lately adorning what is left of Tiberius' Villa in Capri, and starting out from some solid Roman masonry which is as hard as the rock itself. How any plant could live at all and look so happy in such an unpromising situation seemed to me to be one of the greatest of mysteries, but there it was apparently feeding upon nothing, and in some strange and very inexplicable way deriving what nutriment it required from the solid Roman cement in which it was fixed as firmly as if it were held in a vice, or had become by some mysterious agency an integral part of the time-worn ruins themselves. It would be an utter impossibility to tear that plant bodily out of the location it had found for itself, and it only can have got there by some chance seed which was dropped by a bird or wafted by the winds. It had then managed to anchor itself in this way. But when I have come across it in my garden, as I very frequently have done, and can do now, *Capparis spinosa* seems to me to be a protest against many of the ways and wishes of Ryde, or of any other watering-place under the sun. It tells of the mutability of all human affairs, and speaks of deterioration and loss, and is a corrective of the vanity which so often abounds, as if we had to live here for ever. Ephesus, Babylon, Rome, these are the sort of reminders it has for us, and which should not be forgotten. But I have no intention to sermonise just now. Let me only point out how plants very often carry deeper meanings with them than may seem to some persons. I never can look on *Capparis spinosa* without being carried out far and away beyond this place, and taken in thought to scenes which are not in the least represented here.

But now let me turn in an exactly opposite direction. There are very many plants in my garden which only have voices that are full of happiness and delight—indeed, only gladness can be associated with them; for if there is one thing more than another that is exhilarating and fitted to lift one up, is not a mountain excursion in Switzerland an occurrence of just that description, and does it not take one away from all the anxieties and troubles to which we are liable? The blue vault of heaven above, the exhilarating air, the hum of innumerable insects on the wing, the bustle of getting ready, the upward climb along the mountain's side, the companionship of friends, all conspire together to make an effort of this sort as unlike anything that we have here in the towns as can by any possibility be conceived, and it always seems to me that if we

want to live this over again for however brief a space, there is no better way of doing it than that of letting those flowers speak to us which remind us of this sort of thing. It may be but a whiff that we get of our old Swiss experiences, but a whiff is better than nothing, and Switzerland seems in a way to be brought to our very doors when its well-known denizens greet us. *Gentiana verna* is not doing so well with me now as it has done in former days, but whenever I have it here it has an unmistakable message with it from Chamounix or some such place. What myriads of it have I not seen in the Breven or the Flegère! It carries me to the Jardin at once, and I remember the climb I once had to that sort of island in ice, which in August is enamelled over with flowers; or when *Dryas octopetala* fills, as it does now, several pockets in my rockery, and its pleasant creamy-white yellow-stamened blooms are attractive in the highest degree, is it possible to forget the frequent walks one has had across some long moraine where it flourished exceedingly? The leaves are here, as in its own home, shining above and white and downy beneath, and the fruit has a sort of feathery appendage about an inch long. Or take *Anthericum liliastrium majus*, which is such a recommendable plant, how it speaks to you of the grateful warmth and freshness of many a Swiss valley which you have traversed in setting out for an expedition and before any ascent is made. You can see it standing about level with the tips of the blades of grass and mixed up along with them or look at *Anemone alpina*, or *A. sulphurea*, which is really the same thing only in a different colour; it does not differ here so much as it does in its own habitat in point of size and vigour. There, as Mr. Robinson says in "Alpine Flowers," you will find it near some alpine range, a few inches high and humbly holding up its velvety cups; but in descending through the rich green meadows to reach the roofs of men you will brush against many of the stems nearly as tall as the knee, each bearing a soft round head of silken bearded seeds. It grows in a border in this garden with the greatest facility and assumes a magnitude which I have scarcely ever seen to belong to it in any other place. But *Anemone sulphurea* carries me straight away to Pontresina and to excursions about it, or, even more emphatically than this, to the Pic de Sancy, in the Auvergne district in France, where I am sure I have seen millions all nodding together on the mountain slopes and giving a grace and beauty to the whole picture which I cannot attempt to describe. I somehow believe that the French examples of *Anemone sulphurea* were more striking than any even in Switzerland itself, and I believe this has been noticed by others. To mention the mere names of *Aquilegia alpina*, *Hedysarum obscurum*, *Campanula barbata*, *Aster alpinus*, *Astragalus hypoglottis* and many other things of the same sort is to speak of the mountains at once; they all can be grown in an English garden without any trouble at all, and they gladden me here whensoever I see them doing well as though they were old friends come on purpose to visit me and to bring pleasure into my life.

I have said that flowers serve to bring mementoes of absent friends as much as of places to those who look for them, and I am quite sure that it is so in a very remarkable degree. We want nothing to keep warm in our minds the names of friends who are with us here, or of those whom we have lost and who have passed away, but still there is a kind of touch of themselves, the reminders in the latter case of a voice that is still which can be despised

by no one and is sure to be cherished exceedingly. Of all my horticultural friends—by which I mean friends who would not have become such but for a fellowship in the culture of flowers—I place first and foremost among those who are gone the late Harpur Crewe, whose name used to appear so often in THE GARDEN twenty years ago. I knew him very well indeed, and to this day I miss him in my garden in all sorts of ways. He was ready to answer any question that might be put to him, and so well able to do it. He so markedly loved flowers for their own sakes, and so lived amongst them, that nothing has made up for the void which his death caused for me, and causes still. That he loved flowers for their own sakes and nothing else at all may perhaps become apparent to others if I just mention two curious things which I often noticed about him. One is that his encomiums were as often given to some small and perhaps very humble thing as to a more striking object which would take other people instead of it. I have seen this noticed by his friends, and when he used to praise a thing very much indeed in his letters I insensibly discounted his praise, for he loved and praised every flower that grows. The other point about him was more curious still. Not only was he well acquainted with the natural habitats of a very large number of plants, but from going about a good deal and from a quick eye to business he had registered up in his mind where any scarce or good plant could be found in the country and who was in possession of it. I had a strange illustration of this in the following way. Years ago there was a quest in the pages of THE GARDEN for *Fuchsia lycioides*, which was an unknown plant to most persons and could not be heard of at all. It did not occur to me that I was in possession of it myself. I do not know where it came from or how it got into my hands, but Harpur Crewe wrote at once to the editor of THE GARDEN to say he had come across it in my greenhouse, and there it certainly was and there it is now. The plant is not of much account in itself and it is certainly not handsome, but *Fuchsia lycioides* will always have a place on my shelves because of the occurrence I speak of.

Another plant also gives me a strange sort of reminder of my old friend. A very long time ago I had a consignment of things from America, and Mr. Falconer, of Harvard University, sent me several good plants, which I have to this day. Among them was *Iris Hartwegi*, which came into my possession in April and grew and did well. It multiplied very much in the course of the summer and blossomed accordingly. I sent a blossom to Harpur Crewe, and he was immensely delighted with it because he had never seen it before, and begged me to give him a growing bit of the plant. I took it up in autumn and cut the plant into three or four pieces, and gave one piece to him, replanting the rest of it and taking it to be a mere matter of course that all would do well. But, instead of that, both the plant which Harpur Crewe had and those which I kept here very soon died, and for more than twenty years I am sure last past I have never done well with *Iris Hartwegi* again. I either got hold of the wrong thing or, when the right one was given to me, it was given to me at the wrong season of the year. I never knew till quite lately, when I was so informed by Herr Max Leichtlin at Baden-Baden, that *Iris Hartwegi* refuses to be established at any other time of the year besides the spring, and that it prefers April to any other month for a move. Now at last, after this long lapse of time, I have it in my

garden again because it came to me in April of last year. It has just now blossomed profusely, but "touch me not" is written all over it, and I would not meddle with it for any consideration whatever. But these two plants—*Fuchsia lycioides* and *Iris Hartwegi*—are speaking reminders to me of the late Harpur Crewe, because of the very great interest he took in them, and so is also an insignificant little thing, viz., *Ficaria ranunculoides alba*, and that because of the inordinate praise with which it was sent to me. It comes out in this garden anyhow in the spring if allowed to live on because of the commendation which was once lavished upon it. But his knowledge of plants and bulbs was, I should think, unique in itself, and few could compete with it. The postman used to bring him at breakfast-time a pile of letters about flowers as though some regular business were carried on, and he used to correspond with directors of botanic gardens, with nurserymen, and others in very large numbers. I remember on one occasion going to see him at Drayton Beauchamp very late in the month of March. We went out into the garden at once to look at the flowers, but the east wind cut us like a knife, and we simultaneously proposed that we should retire into the house. This was accordingly done, and we talked about flowers to a very late hour, but during the night I heard a sort of pitter-patter constantly going on against my window-pane, and in the morning I found that the whole place was deeply covered with snow, and it was very difficult to get away. Not a sight could be got of any flower at all, and I never was able to pay him a visit again. I stand in need of no mementoes to keep his memory quite fresh in my mind, but I am still glad that *Fuchsia lycioides*, *Ficaria ranunculoides alba*, and *Iris Hartwegi* in a way were so much connected with him and that he took such great interest in all of them.

Another plant I would mention because it brings before me one who was perfectly devoted to his garden and the cultivation of flowers is

VERBASCUM LYCHNITIS.

Between twenty and twenty-five years ago an old gentleman used to migrate from Derbyshire to the Isle of Wight as each winter came round. He generally took a house close to St. John's Church, and we got to know a great deal of each other. The common tie was flowers, and it is wonderful what a strong tie it can become even between two persons who have never till then known anything at all about each other. Mr. H. very soon found out that there were objects of interest in my hands, and very soon he had a *carte blanche* to go through the garden gate as much as he liked and to inspect the place at his leisure. How often have I seen him poring over my beds and examining this plant and examining that with the utmost attentiveness! I remember his seeing *Tulipa Greigi* for the first time and how he was struck with its gorgeous array and the splendid exhibition it makes. He was never tired of looking at my plants, and he stayed here just long enough in the early spring to see a good many. What amazed me as it came from his lips was the oft-repeated lament that he never could find a place in England where he could get good fly fishing and cultivate flowers with success. He was obliged to choose between the two. I should imagine that he had met with a good deal of this world's enjoyment in his life, and certainly he was able to do just what he liked and to live in any place that might fall in with his fancy. But he could not make impossi-

bilities possible and fly-fishing won the day, and flowers had by comparison to go to the wall, for he pitched his tent in Derbyshire, becoming a tenant of the late Duke of Devonshire, and living there to the end of his life; and though he did all that he possibly could do in his garden he was never satisfied with it, nor were a great many of his favourites, notably *Narcissi*, for they could not stand the cold, wet soil at all. He most kindly asked me to visit him near Hassop, and I spent an enjoyable time in his house, being made acquainted by him with many objects of interest and seeing while I was with him a great deal of that very beautiful part of the world. Among other things he took me to visit Haddon Hall, and one could realise there in a measure what mediæval glory must once have been and how captivating the relics of it still are. But this is now my point and that which bears on the paper I have in hand. For the first time in my life I came across *Verbascum Lychnitis*, and I was much struck with it as it grows on tower or wall; it seemed to suit Haddon Hall to perfection and was rampant all over the place. It was easy enough to secure a pinch of seed, and easier still to throw it down on my border, and one had no fear at all about the result, nor doubt as to the crop which would be sure to result on it. As a matter of fact, I have had *Verbascum Lychnitis* well in my garden from that time to this, and if there is any difficulty at all about it, it is the difficulty of keeping it under and of not having too much of a very good thing. But *Verbascum Lychnitis* is entirely owed by me to the kindness of Mr. H. more than twenty years ago, and it is inseparably connected with Haddon Hall in my mind, and seems a part of it. My old friend, not very long after I had been to stay with him, passed away and entered into his rest at a good old age. I was grieved to hear of failing strength and of his imprisonment in his house, and when the end was drawing nigh I was told that his ruling passion was then as strong as ever—the love of flowers was with him still, and he had them all over his bed in profusion to inspect. I know I sent my own contribution, which was the best of the best I could find, and was glad that he was able to notice it. *Verbascum Lychnitis* is valued by me for his sake, and always will be so. Another acquaintance of much the same sort was made in the Isle of Wight, and it began in rather a curious way. The Rev. D. F. had a parish in the north of England, which he was obliged to give up in his declining years, and he came to settle in Sandown. He was, I believe, a good naturalist, and a botanist of some little distinction. He one day took it into his head to write to one of the local papers about gardens in general, and specially about those in the Isle of Wight, and the expression he used was that he did not think there was a single garden which was worth looking at between Sandown and London. He put a black mark over all. It should be said that just at that time he was making war against red *Geraniums* and yellow *Calceolarias*, and the villa gardens on the south side of the island were not such as to give him any pleasure at all. But when I came across such a sweeping condemnation as that which I knew to be undeserved, it was rather difficult to sit down quietly under it, so I wrote to my friend and asked him to come over to Ryde and to see if his words could be mitigated. He accordingly came very soon, and he could hardly have had a better day for a first visit than that which he met with. It was on a beautiful September afternoon that I saw him first, and there were in the air all

that clearness and crispness which belong to the season, but beyond everything else a most dear little favourite of mine was then in full blossom, and *Oxalis lobata* was in its prime in one of my borders which is given up to bulbs. There were many other things of course noted, but this *Oxalis* attracted Mr. D. F. on the moment, and he could not say too much for it. Very soon his sweeping condemnation of all southern gardens was retracted in full, and he found plenty of interest in Ryde, both here and elsewhere, of which he never was tired. I quite agree with him as to the extraordinary beauty of *Oxalis lobata*. It inverts the ordinary process of jewellery, and instead of being an emerald set in gold, it is gold set in emeralds; the fresh green foliage so charmingly surrounds the bright yellow flowers, the whole plant sparkles in the ground. If any flower is ever fit to be called a gem it surely is worthy of it. It is a most dear little thing, one of September's chiefest ornaments, which does very well in sandy loam in Isle of Wight, and which I would not be without on any account. The Rev. D. F. on his first visit of course inspected the *Asters*, the *Sternbergias* and other things of which the place was full at that time of year, but his first choice was his last. I never remember anyone taking a liking to a plant so strongly and so soon. After this I saw him over and over again as long as he lived, and I was always so glad to have a friend near me whom I could consult on any horticultural subject, and from whom there was so much to be learnt, but the time when I think of him most is on some bright September day, and to *Oxalis lobata* I very much indeed owe an acquaintance which came to an end far too soon.

It is always a matter of very great interest to me to have a gardening talk with some old experienced nurseryman who has lived among plants for many years, loved them and cultivated them. I do not by any means intend to say that all nurserymen are on a level in this respect, for they differ exceedingly, and it is easy to tell that £ s. d. is the sole consideration of some of them, while with others it comes in as a sort of necessity, but, incidentally and by the way, I am sure that I have had many friends in that line of life who are as fond and as proud of their plants as I am of my own, and during their long experience they have accumulated treasures of knowledge which they are generally so ready to impart. Of this latter and wide-embracing class let me give three notable instances, all of whom I knew quite well and to whom I looked up. The first that I would mention is old Wheeler, of Warminster. He was always so called, and Wheeler seemed to belong to Warminster; Warminster without him would have been nothing in my eyes. How many visits have I not paid to him, and mostly in the spring when the cold, cutting winds came off the Wiltshire downs and served to shrivel one up. The establishment of Wheeler was like an old curiosity shop which was run upon horticultural lines, and he was himself the greatest curiosity of all—an enthusiast if there has ever been one in this world. I can call to mind now what a pleasure it used to be to me to pay him a visit. There was generally some special plant in blossom exposed for admiration in his little bureau, and outside in his premises there were numbers of old-fashioned and very familiar subjects as well as some that were new. It was in this way that one autumn I came across *Oxalis lobata* and brought it away with me. I had never seen it before till I saw it with him, and I have never been without that most delicious little thing from that day to this. But what I

prized most of everything I have bought from old Wheeler was a delightful and very scarce gem, and which now cannot be got at all for love or money. I refer to *Pulmonaria dahurica*, which I should think very few persons in England have seen and about which they know nothing. Mr. George Paul had it some years ago in his nursery at Broxbourne, but I know he has lost it, and I had it here for some time, but, alas! I have long ceased to be able to say so. It is very difficult to describe a little plant which you have not seen for a long time, but I know it was of the most heavenly blue, and its habit was very neat and, I think, drooping as well. I did not know at first what a priceless treasure had come into my hands, but I took great care of it, and, of course, gave it a pocket on my rockery all to itself and light, rich soil, and I put a glass over its head in winter, the sides being left open. In this way it did quite well for several years, and when others lost it I had it still, thanks, I imagined, to the climate of the Isle of Wight. But my time came in due course for a great disappointment. *Pulmonaria dahurica* dies down in the winter, and it was always a pleasurable excitement to me to watch for it in the spring and to see it come up. This it did for a good many springs in succession, and I seemed to be in possession of quite a large stock of this daintiest of all dainty flowers. But one year, alas! there was no response to my wishes. The little pocket showed no sign of having a tenant at all, the ground was unbroken, and *Pulmonaria dahurica* had passed out of my hands for ever and ever. I mourned over its absence very much indeed, and I attributed its departure to this thing and that. But when spring was over and summer-time had arrived the true cause of the disaster was revealed. Up came one of the most striking of all summer flowers in great strength and self-assertion as well, and *Oenothera marginata* showed, I think, that it had murdered my most precious flower of all and that it had taken its place. One of its strong stolons had run a long way under ground, and then it had most cruelly come up, usurping the premises which were never meant to belong to it. Pure and attractive as *Oenothera marginata* always is, I confess I can never see it without a pang because of this circumstance I have described. You can get the *Oenothera* any day you like for a shilling, but who will bring back *Pulmonaria dahurica* into my hands for pounds upon pounds? It would surprise me now to be told that there is one single specimen of it in the whole country. Where Wheeler got it or how he got it I do not know at all, but the plant is so very delicate and it requires such careful cultivation, that I am not at all surprised that it has been lost. I have written shoals of letters about it to many likely persons both in this country and on the Continent, but it has always been without any success. No one knows anything at all about it now, and I fear its very name is forgotten. Herr Max Leichtlin told me the other day that he did not think it ever would be recovered till a special collector had been sent out on the errand, and this is not likely to come off at all so far as I know. Old Wheeler has long since passed away. To see him was a pleasure; to have a long talk with him was a privilege of no common kind. *Pulmonaria dahurica* and Wheeler of Warminster were always connected together in my mind as long as it lived.

There was another old nurseryman some years ago who should in nowise be forgotten by me. When I first came across Green he was conducting a business at Redhill, and

seemingly doing well in it. I remember his showing me a potful of *Saxifraga valdensis* of which he seemed to be excessively proud, and it was certainly a triumph of most skilful cultivation. *Saxifraga valdensis* is of the crustaceous division of Saxifrages, and very pretty to look at. Its little fleshy grey leaves are arranged in tufted irregularly branching rosettes; their blunt points, crowned with a white tip, are erect and slightly expanding, and the whole forms a very compact and dense mass, from the more prominent of whose rosettes arise the flower-stalks to the height of about 2 inches, clothed with short glandular hairs and crowned with three or four white flowers of great purity. This was the plant that he was carrying in his hands when I first made his acquaintance, and he treated it to as much devotion as if it had been a child, bending over it and being apparently as fond of it as if it had been a member of his own family, and certainly he acted also in that sort of way. He told me that

came to preside over. The grounds of the late Sir G. Macleay were delightful in the highest degree, and not only in one department, but in many the extraordinary skill of his head man in the way of growing plants was allowed to display itself. Every encouragement was given to him by his employer and he had full scope for his powers, but I always thought that the excessive interest of the glass houses, of the herbaceous borders, and indeed of everything else would have been far less than it was if a less capable person had directed the affair. Green was a nurseryman and afterwards a head gardener who lavished great stores of affection upon every plant that ever came into his hands, and *Saxifraga valdensis*, as it was shown to me first of all by him, is a type of the sort of thing which I associate with his name. There was another fine old nurseryman in days that are gone by, and I must not omit some mention of him. I did not know him so well as the other two because he lived far away, but I once

donor to whom I am beholden for them, and with whom they are inseparably connected in my mind. The one brings before me the other, and quite as much as for any beauty of form or colour, or for anything else they have value in my eyes because of the source from which they were derived. Is it nothing that a Myrtle, which will soon be so large that the fowls of the air can lodge under the branches of it, originally came from a small cutting which was a part of the bridal wreath that was worn by one's wife? I think it is a Myrtle and something more—it always has a voice for me additionally to the voice which other Myrtles possess. And so also has a Rose which I have had under my care for nearly fifty years. It belonged to my mother, and, being on its own roots, it has lived on with me all this long time and is now as strong as ever. *Souvenir de Malmaison* is a capital Rose for this sort of continuance, and I would almost guarantee it a spell of another fifty years if it is taken care of by someone and no accident happens to it. It never should be allowed to blossom in the summer, and then in autumn, and even in early winter in the Isle of Wight, it displays itself to perfection. My Rose has followed me wherever I have been since the year 1851, and when I had a garden in the centre of Maidstone of about the size of a pocket handkerchief it was my pride and delight. I can easily sympathise with what Alphonse Karr has said about his three Hyacinths—they were to him what my Rose has been to me since it came into my possession.

There is just one point, of no very great importance however, about which I do not quite follow what the Dean of Rochester has said. A memorial garden, as he terms it, is sure to be a very interesting spot, but it is likely to be small, and I think a visit to it would be of a stiffer and less pleasant description than is the alighting upon memorial plants which are grown in a less restricted, and therefore a more natural way; but this is only a matter of opinion. I like to have my memorial plants scattered here and there all over the greatest possible space, and to come across them at odd times and in odd ways, and the difficulty of cultivating some of them seems almost to demand it. I can only say in conclusion that I advise all those who have not looked at their garden from the above point of view to begin it at once. It does not detract from any other objects they may have in view, but it adds a new and very great interest to what was so interesting before. One's garden becomes the record of a lifetime, and the past can be lived over again in it when it is conducted in this manner.

HENRY EWBANK.



Group of *Lilium giganteum* at Haddon Hill, near Bournemouth.

it was quite impossible for him to go on with his nursery at Redhill because it broke his heart to be obliged to part with objects of great interest, and that he could not do it any more with flowers that had grown up under his care. Accordingly I was not in the very least degree surprised when I heard that the nursery, the stock-in-trade and everything else had been abandoned, that he had parted with all of it, and that he had accepted the situation of head gardener in Sir George Macleay's splendid garden near Redhill. There may have been other reasons at work of which I knew nothing, but I always thought that the one that was assigned to the move was sufficient, and that Green did take a step lower down, so to say, because he wanted to keep the plants under his own eye and in his own hands on which so much care had been lavished. And what a very beautiful and most interesting place he

paid him a long visit at Darley Dale, near Matlock, and he showed me all over his store. The name of Whittaker was a familiar one in those days to the lovers of plants in Derbyshire, and my first acquaintance with *Tropeolum speciosum* in anything like the splendour which I know it can acquire was, I think, made with him.

And here I am sure my long paper may as well come to an end. I hope I have done something to show that, additionally to the question of species and genera, additionally to that of the harmonies of colour, additionally to all tricks of cultivation, a garden may be stored with many objects of great interest if it reminds us of by-gone days, of far-away places and of persons with whom we have been closely bound up. I might add a page or two about friends who are with us still, but there is no occasion to do that. I have scores of plants which tell me of some

FLOWER GARDEN.

LILIUM GIGANTEUM.

I AM sending you a photograph of a famous clump of this glorious *Lilium*. The bulbs are growing in the garden of the Rev. Mr. Hopkins, Rector of Holderness, near Bournemouth. The *locale* is not the rectory, but a beautiful place called Haddon Hill, near Holderness. A more beautiful and peaceful spot I have never seen. The house is modern, and the grounds have not been laid out for more than thirty years. The present head gardener, Mr. Osborne, has planted or superintended planting every conifer and tree except one on the whole estate. The grounds are very extensive, and the *Rhododendrons* and *Pines* and *conifers* are magnificent. This Lily bed is at the end of a large and beautifully kept lawn surrounded by

Pines. There were eighteen *Lilium giganteum* in bloom. Most of these had about fourteen flowers on them. There are about forty bulbs planted, and the gardener informs me that he generally has about fifteen in bloom each year. The tallest one was 10 feet high, and a more magnificent spectacle I have never seen. All these bulbs were got from one bulb, and, strange to say, this was given to Mr. Osborne, so that the whole of this splendid stock cost the raiser nothing at all. I shall not soon forget the impression these Lilies made on me. The grower plants these bulbs very shallow indeed, and takes off all the suckers and plants these in pots. He keeps the young bulbs in pots for about five years, after which he plants them out when all fear of spring frosts is over. He gives one heavy dressing of sewage water and then leaves them alone. He agrees with me that a bulb of this Lily flowers once in five years.

JOHN B. M. CAMM.

Burnham Grange, Bournemouth.

Campanula isophylla.—The pretty pale blue *Campanula* shown recently at the Drill Hall as *Mayi* has been in your columns commented upon adversely in relation to its name with perfect justice. But I could not help remarking the other day, when passing a cottage window at Carshalton where both the true blue *C. isophylla* and the white variety were flowering charmingly, that in this case the type plant had flowers apparently exactly alike in form and colour to those on Mr. May's plants, but the leafage was rather darker and smaller and somewhat serrated. The leafage of the white variety, the most beautiful of the section, is larger, paler, and smoother. I should therefore regard the Edmonton variety as being a pale blue-flowered sport from *isophylla alba*. It should be said of these *Campanulas* that we have no hardy pot plants that are more beautiful for hanging in windows or anywhere than these are.—A. D.

* We fear that the variety to which "A. D." refers as having seen in the cottage window is *C. fragilis*, which often does duty for the blue form of *C. isophylla*. The two are quite distinct in every way.—Ed.

Single Hollyhocks.—An able florist recently asked me to mention where he could obtain seed of a good and varied strain of single Hollyhocks, as he felt they offered wide room for improvement, and he would like to take them in hand for that purpose. I gave him the information, but at the same time strongly urged that in no case should any attempt be made to double them. I do not say that the introduction of a second layer of petals would be objectionable, as we see in a kindred spike-bearing flower, the Delphinium, how in such way the singles have been improved, whilst the creation of doubles has proved singularly objectionable. Double Hollyhocks have their admirers—not so much perhaps because of the rotundity or massiveness of their flowers as for their fine spikes, for it is a happy characteristic of doubles that they remain on the stems, and thus produce fine spikes so much longer than the singles do. But, on the other hand, the singles seem to be more robust, more readily raised from seed, and they do produce flowers in a wonderful variety of colour, many of the hues being singularly beautiful. Only a few days since, riding by rail from Croydon down the Oxted line, I observed near Selsdon Road a most charming selection in flower in a couple of small back gardens, presenting just the form of material my florist friend wished to secure. Certainly it would not be difficult to find in these flowers quite diverse colours or markings. Generally the flowers are large enough and they are of excellent form. The chief defect of the single strain lies in the too great facility on the part of the blooms to fall, and thus a good spike of flowers is rarely seen. We could very well do with a rather dwarfer strain, having more retentive

capacity. Possibly the flowers attract insects too readily, hence rapid pollination and falling. With these defects corrected, single Hollyhocks might be converted into singularly beautiful garden plants.—A. D.

HARDY PLANTS AT NEWSTEAD, WIMBLEDON.

QUITE recently, when looking round Mr. Whitehead's garden at Newstead, Wimbledon, the following plants were in good condition. It should be noted as marking the success of some plants here that the position is on the high road adjacent to the common, and there is little doubt that the elevation and the purer and more bracing air have much to do with the success of some of the plants. The chief part of the garden, so far as the hardy plants are concerned, is one continuous slope that culminates in a spacious pond acting as a receiver for much of the water that flows thitherward in times of heavy rain. In like manner it forms a good receptacle for all superfluous moisture in winter, thus leaving the plants high and dry. Indeed, my own impressions of such a slope are sufficiently good that I would not hesitate to plant many of the rarer alpine plants. The staple soil of the garden is of a clayey nature that in summer resolves into hard, nutty particles—a soil of course that requires not a little modifying to grow good alpine plants with success. To this end peat is employed in some instances, while rock chippings are freely added to the bulk. At the same time, its obviously holding nature is of great benefit to the stronger kinds, and equally so to the success of tree and shrub alike that in the lighter and drier soils languish and die in times of great heat or prolonged drought.

Among the most contented of subjects was the Edelweiss, represented both by the Swiss and Himalayan forms, yet while the latter is much the stronger, both kinds are furnished abundantly with their woolly heads, and growing quite freely spread out into patches that in some of the larger tufts would have at least twenty or thirty heads of flowers. Nor is there any idea of diminished vigour, even with this number in the tufts themselves, for these latter really clothe the ground in their immediate vicinity. In several instances these plants were much the same, no special position being selected in planting. *Houstonia cerulea* is another plant that is so free in this garden as to verge upon being a weed; yet its growth is so free and abundant and its blossoms so profuse as to be quite a revelation. It was the same in several positions, and the plants were only in peat, that has more than once been tried for it, though with very indifferent results. Spring-planted pieces, though smaller, give the same promise of success, which is such that the entire slope may soon be covered with this delightful plant. *Omphalodes Luciliae* is also doing well, though as yet represented by only small plants. These, however, have got hold, and in a shady spot, which the plant does not really require, is quite happy, and producing its exquisitely coloured blossoms profusely. Seeds, no doubt, of it will be saved this year and an attempt made to increase this alpine gem.

Very happy and free-growing is the Hungarian *Campanula Waldsteiniana*. One tuft was flowering abundantly. This, I believe, is the typical plant of this rather variable species, having the radical leaves slightly notched and of nearly a glaucous hue. It is a charming plant when in good condition, and is about 5 inches high. Another pretty *Campanula* is *C. Zoysi*, a singularly dwarf species and a miffy plant in not a few localities. This kind has the constricted corolla which is best known in the *Dielytra*, while in the pale blue flowers it is distinctly pleasing. *Veronica salicifolia* (the Willow-leaved Speedwell) is here a very graceful and elegant plant full of its pretty spikes of closely arranged flowers. One capital example was about 2 feet high and the same through, and the position it occupied rendered it a conspicuous and pleasing object. The blossoms are white with just a suspicion of rose

colour when closely examined, though at a short distance this looks much like a French grey. It is worthy of being seen much more frequently. *Erythraea diffusa* is a pretty dwarf plant of deep rose-pink hue, which in small patches gave a warm glow here and there, the tufts flowering freely in various positions. This is quite an easily grown plant in many gardens. *Campanula Tommasiniana*, one of the most distinct of the bell-flowered family, and indeed a true Bell-flower, is represented by quite a strong established plant. It is a pretty species of slender, elegant habit of growth from the Italian Alps. The flowers are pale blue, distinctly tubular in outline, and each about three-quarters of an inch or rather more long. The slender growth renders it a graceful plant, and for its distinct character it is worthy of being more freely cultivated. It is a good perennial and attains a foot or more high, producing a numerous array of stems from the crown.

A new Russian *Gentian*, *G. Prizewalski*—a ponderous name for any plant, quite sufficient alone to deter it from general cultivation—is flowering for the first time. The plant is distinct from the fact that it is a white-flowered kind, though not a pure or even a good white. The inflorescences are procumbent, the flowers produced in pairs one on either side the stem, some eight or so of these forming the total. Two flower-stems had been produced from a single crown, the few leaves forming the latter lying close to the soil. Individually the blossoms are as large as those of the white *G. asclepiadea*, though perhaps a trifle firmer in texture. Only one flower was open, and this did not impress one with its superiority—rather the reverse. In another spot the Bavarian *Gentian* gave promise of being quite a success, and this though only a few months planted, while the tufts of *G. verna* bear ample testimony to the value and free flowering of this fine plant. A capital bush of *Moltkia petraea*, or *Lithospermum petraeum*, as it is sometimes called, had just finished blooming. The flowers, produced in dense terminal cymes, droop slightly and at first appear of a pinkish hue, but gradually put on a violet-tinted blue shade. The plant is bushy and free, and comes from Dalmatia. A good patch of *Campanula G. F. Wilson* is giving the last few blooms, having already covered a good space, while an apparent seedling form of this is a promising plant. Other things, such as *Primulas*, *Ramondias*, and the like, are doing well, and patches of *Sempervivums* are pretty and interesting. Of the latter, several of the *S. arachnoideum* group are well established, *S. a. Hookeri* in particular being a fine patch.

Around the pond, *Iris levigata*, *Spiraea palmata*, and *S. p. alba* are at home. In a good position on the lawn is one of the finest plants of the Umbrella Pine (*Sciadopitys verticillata*) I have seen. It is a fine pyramid fully 15 feet high, possibly more, and some 9 feet or 10 feet through at the base. The plant is evidently at home on the sloping ground here, and finds ample nourishment in the deep clayey material at hand, which, however, is less cold than would otherwise be the case, owing to the sharp incline on this side of the garden. There is a second plant of this at Newstead, but this is not so good.

A VISITOR.

***Lilium auratum vittatum* variety.**—This beautiful Lily, referred to in the report of the last meeting of the Royal Horticultural Society, and which was shown in good condition by Messrs. Wallace, of Colchester, appeared to me the same as one I obtained from Japan last year under the name of *L. auratum rubro-vittatum platyphyllum*. The bulbs flowered magnificently, but most of them perished afterwards, while those obtained early this year have not proved so satisfactory. In the first place the bulbs differ from those of the ordinary form of *rubro-vittatum* in the scales being wider and more suffused with red; indeed, in the general appearance of the bulb there is a slight leaning towards *L. speciosum rubrum*. The leaves are a little wider than in *rubro-vitta-*

tum, while in the case of the flowers the crimson-purple band is more intense and wider than in the other; indeed, it extends over such a large portion of the petals that they appear to be simply edged with white. It is to be met with in some of the Japanese catalogues, and the bulbs always command a good price.—H. P.

NOTES ON HARDY PLANTS.

Meconopsis aculeata is a little plant with big flowers, and a lot of them of the most lovely turquoise-blue colour. At a height of from 6 inches to 8 inches, two-year-old plants have numerous branched stems bedecked with more than ordinary durable flowers for a Poppywort, and the colour is very striking. As implied by the name, the foliage is prickly. The upper surface of the radical leaves has erect, rigid, horn-like spines each nearly a quarter of an inch long. I imagine this will be a flower of the future. I have tested it and found it quite hardy. It seems to enjoy a rich soil and plenty of moisture when growing, and I have hitherto given it full sunshine, but possibly it may do as well or better in an east or west aspect.

The Scarlet Pea to which "S. A." (p. 92) refers was raised here. It may be of interest to give a few particulars of it, for though not, perhaps, in trade lists, it is a favourite plant in many private collections. Many years ago the late Mr. Thos. Williams, of Ormskirk, during our frequent correspondence, sent me some seed. We were then both hunting for Lord Anson's Blue Pea, and he had got this particularly fine scarlet from someone, I think, abroad. I got two plants from my seed. I grew both for some years, and did not think much more of them than scores of other new things at the time being introduced to these gardens until I had the pleasure of a visit from the Rev. Henry Ewhank, when one plant happened to be in flower. He noticed it, and said the colour and size of bunches for *Lathyrus rotundifolius* were unusual. I then compared it with all the red or reddish tints I could, and my plants proved vastly superior. One correspondent could see in it a metallic sheen changing in its scarlet shades with the varied points from which it might be viewed. "S. A." does well to mention that established specimens should be seen, or, in other words, until the plants are strong the colour and size of flowers are not at their best. I believe there is both the blood of *rotundifolius* and *latifolius* in it. Anyhow, there are the features of both to be seen in it, and a total conformity to neither type.

Campanula Waldsteiniana.—It is very true that there are various plants going under this name. It is equally true that, once the typical plant has been seen through all its annual stages of growth and flowering, it will always be impressed on the mind as not only a most distinct *Campanula*, but as a thing of beauty. One form at least that one can readily lay hold of by reason of its having an authenticated name is *Tommasiniana* of Koch—no doubt an Italian form of or a nearly related variety of this species. It is, however, a greener plant, also taller, the thicker stems laxer flowered, and the flowers themselves more tubular and less bell-shaped. I know that the plants in Mr. Whitehead's Wimbledon garden are not likely to exist there long under wrong names, but it may be useful to show that one wrong plant going under the name of *Waldsteiniana* need not do so when it has both distinct features and an authorised name of its own. There is no time better than the present to see the differences and put the names right (July 31). The most marked distinctions are the relatively less glaucous foliage and longer and stouter stems of *Tommasiniana*.

Campanula Wanneri.—I have lost sight of this plant for the last year or two. It is known to be but an indifferent perennial in some gardens, but I kept it here for years (the same plant) on the drier part of a rock garden, and it gave me seed for my friends. I have tried to get

it from seedsmen, but the seed proved not to be true.

Campanula Raineri (Perpent).—This grey creeper with thick leaves and big flowers almost startles one with its delicate beauty. Once you get the true plant and make it do well, you have an alpine and an achievement to be proud of.

Campanula patula is a scarce British plant, but there can be no more charming Bellflower either for rocks, borders, or the vase. The variety of shade from blue-purple to red-purple and the half starry, half bell-like flowers glisten like glazed wax. Altogether it is a flower to see and to watch from day to day to find out its beautiful features.

J. Wood.

Woodville, Kirkstall.

IS THE SWEDISH RED WATER LILY A VARIETY OF *NYMPHÆA ALBA*?

HAVING had the above Water Lilies growing side by side for five or six years, the differences appear to be so great and so constant that it is very difficult to believe the former to be a natural variety or sport from the other. The differences consist in the size and shape of the leaf, the size, shape, and number of the petals, and the colour of both leaves and flowers. These differences are as great as, if not greater than, those between most of the recognised species of the genus *Nymphaea*.

I will briefly enumerate these differences. The leaves of *N. alba* are somewhat longer than broad; those of *N. rosea* are broader than long. A full-sized leaf of each chosen at random measured as follows: *N. alba*, 10½ inches long, 8¾ inches broad; *N. rosea*, 6 inches long, 6¾ inches broad. Of course, both vary somewhat in proportions, but this difference seems fairly constant and gives a distinct character to the two groups of leaves. Accompanying this difference of proportion is a marked difference of outline, especially of the base of the leaf. In the white species the lobes usually overlap for more than half their length, and the lower termination of each lobe is a very slightly pointed oval. In the red form the lobes open at a very wide angle, and the termination is an oblique unequal-sided blunt point. Out of more than 100 leaves on my red Lily I can see none that approach the overlapping form of the white species, of which it is a specific character, Babington indicating it by the words "notch in the leaves with parallel sides." A Siberian species, *N. nitida*, is described in Hemsley's "Hardy Plants" as having "deeply lobed leaves with spreading lobes," which exactly describes those of the red-flowered form. Equally distinct is the colouring of the two leaves, which differ as follows: *N. alba*, above, clear bright green, below, yellowish green; *N. rosea*, above, an olive-green, very distinct; below, a full dull red, faintly tinged with green.

Coming to the flowers, the differences are equally great. The botanical books give from sixteen to twenty-four as the number of petals in *N. alba*, but in *N. rosea* they are much more numerous—usually about forty. They are also broader and blunter; hence the flowers of *N. rosea* are smaller, with a more regular rosette of petals, often as perfect and compact as in a well-formed double *Dahlia*. Now it appears to me that these various and well-marked differences in form, size, proportions, and coloration of the leaves, as well as in the size, shape, and number of the petals and the coloration of the complete flower—differences which in their entirety are as great as between any two species of the genus inhabiting the same continent—do in themselves constitute *prima facie* evidence that the two forms are distinct species. Of course such evidence must give way if there is

direct proof that the one form is produced from the other by seed without the possibility of any crossing having taken place. The words in italics indicate the essential point needed to constitute such a proof, and I send these notes in the hope of eliciting from some of your readers what is the nature of the evidence that has led botanists, apparently without any hesitation, to class two such very different plants as belonging to the same species.

I may add that I am now growing and flowering in a small tank out of doors, but warmed by a lamp, two blue Water Lilies—*Nymphaea scutata*, from Port Elizabeth, and what appears to be *Nymphaea stellata*, the roots of which were obtained from Diep River, about ten miles from Capetown, where they were probably introduced, though now apparently growing wild.

Dorset.

ALFRED R. WALLACE.

JULY LILIES.

THE white Madonna Lily (*L. candidum*) has this season kept in vigorous health and blossomed well, and has seemingly been freer from the disease than for some years past in this locality, certain groups that have in former years lost their foliage completely before their flowers expanded carrying their stem-leaves unwithered until after their blooms had faded. *L. croceum* is a Lily that nothing seems to harm, blooming as well in seasons when the Madonna Lily is badly affected with the disease as when the latter enjoys comparative immunity. Though not so frequently met with in cottage gardens as *L. candidum*, which, curiously enough, when growing in such spots always appears to enjoy the most excellent health, whether grown in the sun or shade, in damp or dry ground, it is far from being uncommon, and clumps of bulbs that have remained in the same position for years may be seen carrying their erect flowers on stems 7 feet and more in height. *L. Martagon* and *L. M. album* have been in flower, the latter when strongly grown being very effective in the garden, while *L. M. dalmaticum*, with its deep purple flowers, and its variety *L. M. d. Catani*, with even darker coloured blooms, are very vigorous, attaining a stature of from 5 feet to 6 feet, and carrying in some cases as many as two dozen flowers. *L. excelsum*, or *testaceum*, with its crown of pale apricot-buff blossoms, said to be a hybrid between *L. candidum* and *L. chalcedonicum*, is a beautiful garden Lily, and one that apparently appreciates rich food, as a few bulbs planted in some heavily manured ground have far overtopped their less liberally treated relatives. Of the Swamp Lilies, the Panther Lily (*L. pardalinum*) appears to be the most sturdy in constitution, since this sometimes succeeds where *L. canadense* and *L. superbum* fail to prosper. When it does well it is a striking feature in the garden, growing to a height of 7 feet and bearing as many as forty blooms. *L. superbum* and *L. canadense* are also two beautiful Lilies, and with *L. pardalinum* succeed best in peat or leaf-mould in a partially sheltered bed where their roots may be kept moist during their period of growth. These Swamp Lilies are the most graceful of all their race, with slender graceful stems and reflexed spotted flowers swaying to every zephyr, delicately poised at the extremities of long, slight footstalks. *L. Humboldtii* is another handsome Lily, with blossoms of a yellow-fawn tint, blotched with lake. It succeeds well in a mixture of loam and leaf-mould. *L. Szovitzianum*, with its citron-coloured flowers, some self-coloured and some spotted with minute black dots, is a charming flower, and was in bloom during the early days of the month, as was the golden-yellow *L. Hansonii*. The great Himalayan Lily, *L. giganteum*, with its towering stem 9 feet and more in height, and its long ivory-white tubular blooms, stained with purple in the interior, is quite the feature of the Lily bed when in the zenith of its beauty, and on dewy evenings distils its vanilla-like essence on the passing

breezes and renders all the garden odorous. This Lily is partial to deep, but not heavy soil, and is said to be not averse to manurial assistance. After flowering the bulb dies, but a few bulbets are usually to be found round the base of the stem, which if grown on under favourable conditions should flower in the course of from three to four years. In heavy, damp soil, however, the bulbs will often decrease instead of increase in size. Towards the close of the month the brightest of all Lilies, the scarlet Turk's-cap (*L. chalcedonicum*), came into flower, its blossoms of a vivid vermilion hue. Like the Martagons, it grows well in ordinary garden soil, and is a Lily that no collection should lack. The splendid *L. auratum* commenced to bloom as the month was ending. It is marvellously handsome with its wide-spreading, showily-tinted flowers, and it is a pity that it is not more to be depended on. In some soils it may be possible to count on its becoming permanently established, but in the majority it appears to die out after blossoming well for a season or two, which entails yearly planting if its presence in the garden is to be assured. S. W. F.

Torquay.

YELLOW GROUND AND FANCY CARNATIONS.

THE confusion in the yellow ground Carnations alluded to by "H. S." on page 107 arises from the circumstance that this section is a comparatively new one, and that no serious attempt has as yet been made to classify them. The fact is, that with, perhaps, the exception of Mr. J. Douglas, no leading grower is found advocating classification, the general desire being to defer it for the present. I am with Mr. Douglas in the desire that out of the material already possessed a section of yellow ground Picotees should be formed, and so separate them from the yellow grounds. It is objected that there is not enough material to commence with, but I hold that there is. Mr. Martin R. Smith created something in the way of a sensation by producing at the Crystal Palace show a beautiful wire-edged yellow ground Picotee in Childe Harold, and as it does not now take long for a new Carnation to get into commerce, this fine variety will doubtless be in the hands of growers two years hence. On the occasion of the recent annual exhibition of the National Carnation Society at the Crystal Palace there were classes for the best bloom of a yellow ground Picotee, heavy edge, and also light edge. In the former class Gertrude was placed first and Aldeforan second, both new varieties of Mr. M. R. Smith's raising, and Mrs. R. Sydenham was third. The two former are not yet in commerce, but soon will be, no doubt. In the light-edged class Childe Harold was placed first and Speranza (Mr. M. R. Smith) second; Mrs. Douglas was third and Fanfuella (Mr. Smith) fourth. The society thus recognises a distinct section of yellow ground Picotees, and what the committee should next do should be to form a class for six blooms in not less than three varieties. The following are clearly admissible to compete in addition to those named above: His Excellency, Effie Deans, Badminton, and Empress Eugénie. It cannot be expected that the edge of colour, whether heavy or light, will be as perfect as is the case with some of the white-edged Picotees, but it is expedient to make a beginning, and the sooner it is made the sooner will a high standard of quality be set up, such as that observed in Childe Harold. Mrs. Gordon, Mrs. Tremayne, Florrie Henwood, Eldorado, May Queen, The Gift, Dervish, Voltaire, Ladas, and Golden Eagle are all classed as yellow ground Picotees, though they are more or less marked with slight bars of colour breaking through the petal edge into the ground of the flower. It is clearly the duty of the judges to select those flowers freest from these bars, and the very act of forming such a class would give a new impetus to the raising of the highest types. In present competitions for fancy Carnations yellow grounds

are admissible, and that is why Voltaire was found shown as a yellow Picotee and also as a fancy Carnation. If the committee of the National Carnation Society were to form a section of yellow ground Picotees and name certain varieties as admissible to be shown as such this confusion would practically cease. A fancy Carnation is anything which cannot be classified in any other section. It is a convenient term, if not very intelligible. It comprises a large number of very handsome and striking flowers, the which when shown in their best character are always attractive. The ground colours and the marginal colours alike may be of any combination or tint, and the term is thus able to comprehend much that would otherwise be lost to the exhibition table. R. D.

Geranium Henry Jacoby.—Probably this is the most generally grown bedding Geranium in existence. It matters not in what direction one looks he finds it, it being easily distinguishable by its free growth and bold dark crimson flower-truss. One thing, however, needing observance is not to give Jacoby a too rich root run, as in such the plants have a tendency to grow rankly, and consequently produce bloom sparingly. This I have noticed over and over again. Some others, on the other hand, notably Vesuvius, are the better for a rich larder, being in ordinary soil prone to make too stubby a growth and undersized blooms. Given the right treatment, however, Vesuvius is still hard to beat by any Geranium of its colour. It seems to me that much greater strides have been made in zonal Geraniums suitable for indoor or pot culture than in the bedding section, this being proved by the fact that not a few varieties raised twenty or thirty years ago are still first favourites with many.—J. C.

Cactus Dahlia Magnificent.—This is one of Mr. J. Stredwick's introductions, and was last year regarded when shown as one of the best of the season, new in colour, and of the most approved Cactus shape, while in respect of habit it exhibits a marked improvement upon some other new varieties. It grows about 4½ feet, it produces freely lateral growths, and the flower-stems are well thrown out beyond the foliage, while it is very free of bloom. As far as my own experience of this variety goes, Magnificent gives good blooms early in the season, and one has not to wait for flowers true to character until the end is nearly reached, as is the case with some sorts. In this respect it is satisfactory to note a decided improvement in the case of Magnificent, and it becomes a welcome addition to the number of Cactus Dahlias which are early to bloom, free, and throw their flowers well above the foliage, and thus adapted for flower garden decoration. Our raisers of Cactus Dahlias are giving much attention to the improvement of the habit of growth.—R. D.

NOTES AND QUESTIONS.—FLOWER.

Cactus Dahlia Britannia.—Not the least in merit among the newer kinds is this. The plant is less than a yard high and covered with bloom. Each flower opens perfectly. The colour, a nice shade of salmon-buff, is distinct and pleasing.—H.

Cactus Dahlia Mrs. John Goddard.—This has blooms of a deep rich red and has the good quality of lightness in the form of its petals. Not a tall grower and very free-flowering, it is among others very distinct. The blooms, too, are more lasting than is the case with sorts generally.—H.

Tricolor Pelargoniums.—Almost the only one of this once very popular section of bedding plants now employed for that purpose is Mrs. Pollock, always the most popular of the golden tricolors. But there is one variety yet far from common that either as a pot or bedding plant is a great advance on Mrs. Pollock, and that is Mrs. Harry Cox. This is a bold, robust grower, with stout, rounded, highly coloured leaves, and does wonderfully well outdoors. I have seen this variety occasionally, and but the other day came across a few plants in a flower garden when with Mr. Burrell, of Claremont, who also was greatly taken with it. No

tricolor put into commerce that I have seen at all equals this one as a desirable bedding plant, especially when put out thinly.—A. D.

NOTES OF THE WEEK.

Statice latifolia.—The large heads of this fine Sea Lavender have made a good display of late, and even now are not wholly devoid of colour. Among good perennials this should always be well to the front, being easy of culture, dwarf in habit and requiring but little care to maintain it in good condition.

Sidalcea Lieteri.—The fringed or deeply cut blossoms of this plant render it a pleasing feature in the border, and even in a small group it is in consequence rendered attractive. The colour too is pleasing, and the plant, which is about 3 feet high, deserves more attention generally. It succeeds well in ordinary soils.

Geranium cinereum album.—Few plants so well suited to rockwork are possessed of more dainty blossoms than this. Its competitors in this respect are nearly allied subjects, viz., the *Erodiums*. In the above there is a purity of tone not always seen in these dwarf plants, and the delicate tinge of colour as the flowers increase in age has a singularly pretty and pleasing effect.

Passiflora Constance Elliott in S.W. Scotland.—Last year I referred to this Passion Flower as being hardy at Orchardton, Castle Douglas. This season I have come across a good plant which has been on the front of the office at Kerr Brothers' nursery at Dumfries for some years. The climate at Orchardton is rather milder than that of the town of Dumfries, which is further inland, and it is encouraging to see a good specimen of *Passiflora Constance Elliott* in this latter locality.—S. A.

Adenophora liliifolia.—This is, perhaps, one of the most graceful of summer-flowering plants, notwithstanding it is rather tall, and perhaps too sparse in habit of growth for some. Yet it is here that its grace and beauty are so apparent. By some it would be regarded as too tall for the rock garden, yet it is in some such place that one catches the transparent beauty and charm such elegant subjects provide. Particularly pleasing is this from a side view as well, and the many pale blue flowers borne on a good-sized plant render it among the most useful of summer plants.

Campanula betulæfolia is a distinct member of the Bellflower family, in which the foliage is distinctly as well as deeply cut, the flowers, which are of a pinkish hue, being equally distinct. This is so indeed in form as much as in colour, for while the latter is comparatively rare, it is not unknown altogether, though the form of the flower, a sort of expanding bell, say from a quarter of an inch wide at the stalk end, to nearly an inch across at the tip of the corolla, is a characteristic almost unique in the group. Even from this point of view the kind should be worth cultivating.

Campanula carpatica pelviformis.—So far as the flowers of this handsome kind are concerned, there is nothing to indicate in the least that it belongs to the Carpathian Harebell, which in reality is the case. The resemblance is easily seen in the leafage of the plant, which is almost identical with that of the parent. The flowers of this distinct kind are almost, if not quite, unique even among the varied forms of which this group is composed. Less vigorous, too, it appears generally and much dwarfer, the plant is even more suited to the rock garden than the original species, which, by the way, is quite at home in both. This beautiful kind is seen but very seldom in good plants despite the fact that it has been some years now known to hardy plant growers.

Mr. J. Wood's Scarlet Pea.—*Lathyrus Drummondii* answers to this description. I obtained it many years ago from Mr. C. Green when gardener at Pendell Court, Bletchingley. It is related to *L. rotundifolius*, but Mr. Green always

held—and my experience of it confirms his statement—that it is quite distinct. It is both earlier and much more prolific of bloom, seeding as a rule somewhat sparingly. Its earliness is seen from the fact that its perennial root-stock breaks into growth much earlier than that of any perennial Pea I am acquainted with. It grows to a height of about 5 feet, and when supported by a few ordinary Pea stakes and looked after in the matter of water, it shows an extraordinary surface of bloom. It should be planted in rich soil, be well mulched and watered, and then it becomes a splendid object in the border. I find it does best in an open, sunny position.—R. D.

Eremurus Elwesianus in Westmoreland.—This Eremurus flowered in my garden at Wansfell Holme, Windermere, early in June, and was photographed by my daughter when at its best. The plant was bought in October, 1898, and planted in one of my herbaceous borders. During the winter and early spring the roots were protected to prevent injury from frost. In spite of all protection the points of the large leaves were touched by the cold winds and slightly disfigured, but no material harm happened to the plant, for it grew strongly and began to show its flower-spike early in the month of April. The following measurements may be of interest, viz.: Length of spike, 7 feet 3 inches; diameter of flowering portion, $4\frac{1}{2}$ inches. Three branches were produced, 20 inches, 19 inches, and about 6 inches in length. The Eremurus was planted on October 7, 1898, and the photo was taken on June 7, 1899.—O. O. WRIGLEY, *Bridge Hall, Bury, Lancashire.*

Campanula Vidalii.—Several times some interesting notes have appeared in THE GARDEN respecting this Campanula and its hardiness. Others, like myself, appear to have been in hope that it might prove hardy in our gardens even when it has been too tender in similar places. I think it was Mr. Wood who referred to it in hopeful terms last year, and one would be glad to hear how Campanula Vidalii has done with him. Your Cornish correspondent, "C. R.," does not, in the note on page 111, give us much encouragement, as it appears it has been killed regularly until this year. When this occurs in Cornwall it is to be feared that there is not much prospect of success for us in the north. With me it has failed in as warm and sheltered a place as I could find. One is not surprised that this distinct Bellflower should be tender, but as plants from even warmer places than the Azores have proved hardy here, a little experiment has been desirable.—S. ARNOTT, *Cursethorn, by Dumfries, N.B.*

Gutierrezia Euthamiae.—Sometimes when one has grown a plant for some years it acquires in our eyes a beauty which could not at first be realised. This peculiarly named plant may be one of those, and may improve much upon acquaintance. I came across it the other day and was not particularly impressed with it, although it may have been due to want of taste. The foliage is light-looking, but the small flowers are of a greenish yellow, which is not very attractive. It seems to be an inferior plant to some others of somewhat similar appearance. The owner of the garden in which it was grown did not think highly of this Gutierrezia, but it is quite possible that one might admire it when it develops into a mass. Perhaps someone who has had experience of it may give us some information about its worth and requirements. It is, I learn from the "Kew Index," a native of Western North America, and belongs to the Natural Order Compositæ.—S. ARNOTT.

Rodgersia podophylla.—One is glad to observe the pleasant notes on the Japan Bronze Leaf by "A. L. L." in THE GARDEN of August 5. As no special mention is made of the bronzy colouring which adds so much to the beauty of the plant and has given it the popular name of Bronze Leaf, one may be pardoned for referring to it now. It is one of the most attractive features of the plant, and anything which prevents

its development cannot fail to be worthy of observation so as to avoid the cause which hinders it from assuming its distinctive bronzy tints. Both in my own garden and in others I find that plants which are in a wet position, such as on the margin of a pond where the soil is constantly saturated with water, are not nearly so well coloured as are those which are in drier places. While this is what I have observed, I hope it is not imagined that I advocate keeping it dry, as it likes a liberal supply of water. It is an excess of moisture which appears to keep the leaves green.—S. A.

Veratrum nigrum.—As an August flowering plant this Veratrum is highly desirable, although its worth does not lie in brilliancy or effect of colour. Usually at flowering time its fine ribbed, massive leaves have also lost part of the beauty which is their marked characteristic in the earlier months, so that they are less attractive. Yet the tall spike is very fine with its array of blackish purple flowers. We are told that the spike is from 1 foot to 3 feet high, but it is occasionally higher than that, and one I saw the other day had a grand spike which could not be much less than 5 feet in height. This was at Summer-ville, Dumfries. The Black Veratrum is not, unfortunately, a very free bloomer, and one has known plants which have not given flowers for some years. Still, a spike or two of these flowers, whose beauty consists in their deep colouring, will compensate for years of waiting. Nearly all the Veratrum are noble plants either when they unfold their plaited leaves, which, as Gerard says, are "folded into pleats like a garment pleated to be laid up in a chest," or when in flower.—S. A.

Spigelia marilandica (Worm Grass).—This is, perhaps, one of the most delightful of North American plants, and one all too rarely seen in anything approaching established plants in British gardens. The flowers, too, are possessed of a rare colour combination—crimson and gold—the former, which is perhaps of a blood-crimson hue rather than otherwise, enveloping the exterior of the corolla, while inwardly and also on the reflexed lobes of the corolla the golden hue prevails. The nearly tubular flowers, which are erect, are about 2 inches long and appear at the summit of the growth, which is rarely more than 8 inches high and frequently much less. In good tufts the stems spring up quite thickly, and when these are crowned with flowers the plant is very brilliant. In the rich and often moist woods of Pennsylvania and Florida this plant is found abundantly, and could it be but induced to flourish in like manner in British gardens, it would certainly prove most welcome. Planted in moist peat and where shade is more or less permanent, the real value of the Worm Grass is seen. In the drier portions of the artificial bog garden this plant should find a congenial home.

Ostrowskya magnifica in Kent.—From the occasional accounts that have appeared in THE GARDEN about Ostrowskya magnifica it seems to be very far from fulfilling the great future that was supposed to be before it at the time of its introduction. My experience with the plant, however, has been more fortunate than that of others, and this season I can record an unqualified success. My plant is close to a very thick and high Box hedge facing almost due south and moderately protected from the east. The soil is a deep, but light loam, and in the exceptionally dry seasons we have had for some years past becomes baked and dust-dry for the greater part of the summer. This year my plant attained a height of between 5 feet and 6 feet, and bore on four stems thirty-two flowers of a pure white save for a faint bluish tinge; at all times of the day the flowers faced slightly west of south. I have never missed having a few flowers for some years past, but late May frosts have usually crippled most of the buds; this year I used a light covering of tiffany whenever frost seemed likely. I keep a large sheet of glass over the roots during the winter; this is only removed when growth has well started. In its earlier stages even severe frost seems to have no effect on the unprotected

foliage. I send herewith a sketch which gives a good idea of the habit of the plant, but the lower leaves have usually turned yellow by the time the flowers are expanded.—R. A. TODD, *Honeydon, North Cray, Kent.*

Lilium chalcedonicum.—The Chalcedonian Lily is generally a favourite with most people, its bright flowers of what is often called "sealing-wax scarlet" being very effective. Although it is in some gardens a little difficult to establish and sometimes takes a few years before it reaches a flowering stage, it is not generally a troublesome subject. In the border it is a very attractive Lily, and in wild gardening it has been used with fine effect. In the south-west of Scotland it is comparatively common, but is never too often seen. Like many other plants, it has several varieties, and one would like to know how many of these there are. Your contributor "H. P.," who has a special knowledge of Lilies, may perhaps be able to help us. From the "Dictionary of Gardening" one would gather that there are plants with yellowish flowers, and that in addition to the type there are the varieties majus and græcum. The varieties I have come across are, first, the usual form, of medium height, with scarlet flowers with small blackish dots; second, the tall form with small flowers, called græcum; third, a variety without the black dots; and fourth, a tall, deep-coloured form with broad segments, which I take to be the one named majus. This was very fine the other day in the garden of Mr. John Maxwell, Maxwelltown, Dumfries, where was also a fine plant of the type bearing eleven flowers, although the usual number is only given as from one to six. One finds that these Turk's-cap Lilies, as those of the section with recurved segments are usually called, are general favourites.—S. ARNOTT.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, Aug. 15, in the Drill Hall, James Street, Westminster, 1—5 p.m. At 3 o'clock a lecture on "Pruning" will be given by Mr. R. P. Brotherston.

The weather in West Herts.—Another very warm week and the fifth in succession. On three days the highest temperature in shade exceeded 80°, while nearly all the nights were also very warm. Both at 1 foot and 2 feet deep the ground is now about 6° warmer than is seasonable. At 9 p.m. on the 4th the temperature at 2 feet deep stood at 69°, and at 1 foot deep 74°, both of which are the highest readings I have yet registered here at these depths at any period of the year. A little rain fell on two days, but only sufficient to lay the dust, and no measurable quantity of rain-water has now come through either of the percolation gauges for a week. The winds were, as a rule, light, and came mostly from some northerly or easterly point of the compass.—E. M., *Berkhamsted.*

Chrysanthemums unhealthy.—Will you kindly say if it is the Chrysanthemum rust which affects the enclosed leaves? It occurs on single varieties which I have had for some years.—E. ALLEN.

* * The leaves sent are not affected with rust, but have been eaten by the leaf-mining fly known to be troublesome to Celery. The holes in the same appear to have been made by small caterpillars.—Ed.

Names of plants.—J. A.—14, Campanula pumila alba; 16, C. persicifolia (type); 19, C. muralis (syn., Portenschlagiana); 20 and 23, forms of C. Trachelium; 21, C. grandis; 24, C. garganica.—B.—Veratrum nigrum (False or Black Hellebore).—Ireland.—1, looks like Rosa lucida, but should like to see flowers; 2, Andromeda floribunda; 3, Escallonia Philippiana; others next week.—Rowe Lewis.—Flowers shrivelled up.

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THE GARDEN.

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INDEX.

(Illustrations in *Italics*.)

Orchard and Fruit:—

Apple Beauty of Bath ..	133
Grape Lady Downe's ..	133
Peach and Nectarine trees, young & old ..	134
Peach Crimson Galande ..	133
Pears adopted by the Congrès Pomologique of France ..	134
Plum, the Myrobalan ..	133
Stocks, blight-proof ..	133
Strawberries President and Keens' Seedling ..	135
Wineberry, the Japanese ..	134

Roses:—

Rosa anemoniflora ..	136
Rosa Wichuriana ..	136
Rose Caroline Testout ..	135
Rose Celine Forestier ..	135
Rose Duchesse d'Auerstadt ..	136
Rose Robert Duncan ..	136
Rose Sir Rowland Hill ..	136
Rose Tenyson ..	136
Roses in August ..	135
Roses, red, for Christmas ..	136

Kitchen:—

Cucumbers, winter, in pots ..	136
Pea, a dwarf No Plus Ultra ..	136

Pea Sharpe's Queen ..	136
Potato Carter's First Crop ..	136
Potato Ninety-fold ..	136
Tomatoes for market ..	136

Trees and Shrubs:—

Buddleia variabilis ..	139
<i>Ceanothus americanus</i> in the Royal Gardens, Kew ..	137
<i>Ceanothus</i> ..	137
Trees and shrubs in bloom in July ..	135

Stove and Greenhouse:—

Acacia cordata ..	139
<i>Acacia cordata</i> , part of a plant of ..	136
Allamanda grandiflora ..	140
Alpinia mutica ..	141
Bouvardia Humboldtii corymbiflora ..	140
Campanula Vidali ..	140
Cassia corymbosa ..	149
Clerodendron fallax ..	139
Costus igneus from seed ..	141
Cyrtanthi in flower ..	139
Hedychium coronarium ..	140
Hydrangea Hortensia in pots ..	140

Pelargonium, Ivy-leaved, Mme. Crousse ..	141
Pelargoniums, Ivy-leaved, for cutting ..	139
Pelargoniums, propagating Rhododendron Falconeri ..	140
Streptosolen Jamesoni ..	139

The Market Garden:—

Banana, the, in cultivation and commerce ..	141
---	-----

Garden Flora:—

Lælio-Cattleya Dominiana laogleyensis ..	142
Lælio-Cattleya Dominiana laogleyensis ..	143

Week's Work:—

Fruits under glass, work among ..	143
Kitchen garden, work in the ..	144

Fruit and Vegetable Crops ..

..	144
----	-----

Orchids:—

Anæctochili ..	148
Cattleyas, watering ..	147

Chysis bractescens ..	147
Dendrobium Aphrodite ..	148
Lycaste lanipes ..	147
Masdevallia radiosa ..	147
<i>Odontoglossum Franz Mascov</i> ..	146
<i>Odontoglossum</i> , some recent ..	146
Saccolabiums ..	147

Flower:—

Acanthus mollis latifolius ..	149
Galega officinalis ..	149
Iris asyriaca ..	149
Iris Straussi ..	149
Potentilla formosa ..	149
Rudbeckia Golden Glow ..	148
<i>Rudbeckia Golden Glow</i> ..	148
Tritoma grandiflora ..	149

Societies:—

Royal Horticultural ..	149
------------------------	-----

Notes of the Week:—

Acer californicum aureum ..	151
Campanula excisa ..	151
Campanula isophylla Mayi ..	151

Campanula carpatica pelvisformis ..	152
Echinacea purpurea ..	152
Gentiana asclepiadea alba ..	152
Gentiana linearis ..	152
Gentiana tibetica ..	151
Heuchera brizoides ..	151
Nymphaea stellata in the open air ..	151
Pansy, Tufted, Howard H. Crane ..	151
Pansy, Tufted, King of the Blues ..	15
Peas, Sweet ..	151
Phloxes, herbaceous ..	151
Platycodon Mariæ ..	151
Samolium Hookeri ..	152
Veratrum nigrum ..	152

Miscellaneous:—

Dahlia, Cactus, Lucius ..	144
Dahlias, caterpillars on ..	152
Dutchman's Pipe, the ..	152
Hammer-smith, open space for ..	152
Market gardens ..	152
Peas, Sweet, exhibiting ..	148
Weather in W. Herts ..	152

ORCHARD AND FRUIT GARDEN.

BLIGHT-PROOF STOCKS.

TO THE EDITOR OF THE GARDEN.

SIR,—I read with interest the correspondence re Northern Spy Apple for stocks on page 248, April No. of THE GARDEN, and your request for further information upon the subject. Here, in the North Island of New Zealand, the woolly aphid is our greatest trouble in Apple growing, and as necessity is the mother of invention, our growers had to devise some means of alleviating, if not overcoming the difficulty altogether. This has been done, as far as the roots are concerned, by working the different varieties upon the Northern Spy stock. The Northern Spy Apple is absolutely proof against the woolly aphid. To obtain a supply of stocks, the Spy itself must be produced upon its own roots, which can be done by layering the branches, or by the system of root grafting, that is, by inserting a small piece of root of an ordinary stock say 2 inches above the base of the Northern Spy scion. The root thus inserted and properly tied will enable the scion to grow, and in time roots will be produced at the base of the scion, when the side root may be removed, and the whole tree will be upon its own roots. When once a few dozen trees are produced upon their own roots it is a simple matter to work up a stock by root grafting, obtaining only Spy roots; by this means Northern Spy stocks are produced. There are other varieties that are non-blighting and suitable for stocks, but the Northern Spy is the best, being fibrous-rooted, and brings the trees into bearing early. In America the State Board of Horticulture is experimenting with most satisfactory results. Some fifty trees were obtained from Australia on Northern Spy roots and planted in an old nursery where trees that were badly affected with woolly aphid had been recently growing, the ground being full of roots that were covered with the aphid. Upon the results of the examination, the trees on blight-proof Spy stocks were dug up and found absolutely free from aphid. Roots were cut off and distributed to all who desired to experiment with them, using the roots as stock and Northern Spy as scion.

The resistance of the Northern Spy to woolly aphid is thoroughly established, and has been demonstrated in Australia and New Zealand for over thirty years. In this Auckland province of New Zealand attention is directed to the raising of varieties of Apples that resist the woolly aphid, and with such success, that our growers will be able to discard the sorts that blight badly. Cox's Orange Pippin, Ribston Pippin, King of the Pippins, Blenheim Orange, and the majority of the best of European varieties blight so badly, that they are hardly worth growing, even although we are able to keep the roots perfectly clean by working them upon the blight-proof Northern Spy stock. It seems incredible that the aphid should attack some varieties and not others, but such is the indisputable fact with the N. Spy. It has not yet been found out why the insect discriminates, yet it is a fact that it does. As an instance, take the Grape Vine. The Phylloxera destroys the roots of some varieties, but will not attack others. The same thing occurs throughout the insect world. To my mind, it is surprising that the Northern Spy has not been made use of in Europe as a stock for the Apple.

Being a constant reader of your valuable paper during the last two years, I have noticed that attention has been frequently called to the prevalence of woolly aphid upon Apple trees, and that various remedies have been suggested, but never any mention made of using resistant stocks. I can assure you that it can be entirely got rid of by working upon the resistant stocks. Nurserymen here would never think of working their trees upon any other, as they would immediately lose their business. I hope the Spy will come into prominence as a stock for the Apple in localities where woolly aphid is troublesome.

D. A. HAY.

Auckland.

Apple Beauty of Bath.—This will eventually take a high place among early dessert Apples, for it is a very pretty and attractive variety, ready early in August and of far better quality than the majority of early kinds. A dish of it on coloured Vine leaves looks extremely pretty, the fruit being flattish round, russet yellow, with

streaks of green and very bright red. The tree is a free bearer and of fairly vigorous habit, and on the free stock makes a fine healthy-looking bush or pyramid. The flesh is white, juicy and tender, sub-acid at first and sweeter afterwards.

The Myrobalan Plum.—This pretty little Plum should be grown in the pleasure grounds or in parts of the garden where room can be spared, and in a season of scarcity of other Plums the fruit would be very welcome for tarts and preserving. Not only this, but the plants are very pretty whether in fruit or flower, and would be well worth growing for the sake of appearance only. The growth is very free and vigorous, and it would make an attractive and excellent fence if kept low for a year or two and then allowed to thicken out. Nurserymen still persist in using it for a stock for Peaches, and many early failures of fine trees may be traced to it.

Grape Lady Downe's.—Although usually grown only as a late Grape, I find a rod or two of this very useful in the intermediate house where it makes a useful succession to the Black Hamburgh, and its brisk pleasant flavour is liked as a change. The additional time given the wood to ripen is in its favour, as the bunches from well-ripened Vines are always more compact and have better shoulders than those from canes that are started late and have to develop their wood late in autumn. This, of course, is true of all varieties, but I think that the loose bunches with a long bare neck sometimes seen on Lady Downe's are very often the result of badly ripened wood. Where a little fire-heat is allowed and plenty of air kept on, as it should be in all well-managed late houses of Vines, this failing is less apparent. This variety colours perfectly under the conditions named above, and does not show the same disposition to turn foxy as Gros Colman.—H.

Peach Crimson Galande.—There is no question about this being a fine handsome Peach to look at and good for exhibition for this reason. But I was bound to condole with a fellow exhibitor recently when he was beaten by it, his own dish being a very fine one of Alexandra Noblesse. There is no doubt that had the judges tasted the fruits and awarded the prize for flavour, the Noblesse would have won easily, but the fruit has not the colour and appearance, and for this reason had to go under. When ripened under the very best conditions Crimson Galande is only fair in flavour, and if hurried at the finish quite poor. Its season is about the same as that of Violette

Hâtive, which is a far better Peach in every way, a sure cropper, a fairly handsome Peach for exhibition, and of excellent flavour. The best fruits of Crimson Galande I ever tasted were grown on a south-west aspect in a Wiltshire garden, where the soil was rather light with a little chalk in it. In such soils as this, if the roots are well looked after as to moisture and manure, I believe Peaches show their very best points as regards colour and flavour.—H.

The Japanese Wineberry.—It is strange that this showy and useful autumn fruit should not be more generally grown, especially in gardens where choice preserves are appreciated. It is now some twenty years since its introduction, yet it is in few gardens one meets with it. It is perhaps rather more tender than the Raspberry, but it stands ordinary winters uninjured in most localities. By some the well-ripened fruit is preferred to Raspberries, even in a raw state, but the majority, I think, value it principally for jam. The bushes enjoy a deep, moist root-run, and in dry seasons a good mulch, together with a couple of thorough soakings of farmyard liquid, will improve the size and quality of the fruit and also strengthen growth. I believe this Wineberry would pay if grown for market, as so many people like preserves having a slight acidity.—C. N.

YOUNG & OLD PEACH AND NECTARINE TREES.

THERE can be no doubt that a great deal of valuable space under glass and on walls is wasted owing to the trees thereon having grown out of the profitable stage. Very little wood is made annually, and if perchance a branch dies the trees have not enough vigour to make up the deficiency with good wood. The shoots are very short and weak, the fruit naturally suffering in point of size and quality. The contrast between these and young, vigorous trees is very marked, for a mistake in culture with the latter is much more easily rectified, and if allowed their head and properly attended to at the roots they will bear without injury a remarkably heavy crop. Indeed, a heavy crop is necessary to their well-being, for if the crop is light and the trees rooting freely in a new border, they are very apt to grow too strongly and get into an unfruitful habit. Many growers object to planting large trained trees, and where one can afford to wait for results, possibly maidens one year from the bud are best. But with careful planting in proper season of good, well-rooted trees, there is no reason why a limited number of good fruits could not be gathered the season after planting. One point must be insisted on. The trees must be obtained from nurserymen of standing who make a speciality of fruit culture, and, if possible, personal selection of the trees should be made. There is no mistaking the well-balanced fruitful tree with its even and not too strong growth. It is perfectly distinct from a tree that, owing to careless culture in the early stages, has formed a quantity of gross sappy wood. Again, the trees must be carefully lifted in suitable weather just as the leaf is turning to fall and planted immediately they are received. The best plan I know to quickly furnish a house is to obtain maiden trees a couple of seasons before they are required and plant them against a suitable wall for the two seasons. Then they are at hand when they are wanted, and, no matter how early in the season, the roots may be thoroughly soaked and the trees lifted and replanted with no delay whatever. Such trees do not feel the removal, and the slight check given the roots is an advantage in nearly every case, as it corrects the tendency to strong wood that is sometimes observed in healthy young trees. If a few young trees were purchased occasionally and grown on, they would come in very useful for filling up blanks when a tree dies or is removed owing to lack of quality in the fruit.

The subject of border-making need not here be gone into further than to say that it is often shelved on account of the supposed trouble involved, and old trees are kept for that reason.

But, properly set about, it is neither a long nor a tedious job, and should not be neglected. This being so, it is all the more unaccountable that old and worthless trees are allowed to remain instead of being cleared out and replaced with young and fruitful ones. H. R.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 114.)

CERTEAU D'AUTOMNE (*syns.*, *Petit Certeau*, *Belissime d'Automne*, *Vermillon Poire de Fusée*—*Cuisse Dome*, by mistake).—The fruit is small, long, pyriform. The stalk is fairly long, slender, curved, set at the summit of the fruit, sometimes straight, sometimes obliquely. The eye is open, set almost level with the fruit in a scarcely perceptible depression. The skin is rather rough, golden yellow, a little tinged and streaked with carmine-red, stippled grey. The flesh is white, crisp, not juicy. The fruit is very good for cooking, and ripens October to December. The tree is vigorous, fertile, but uncertain. In cultivation the tree is vigorous both on the Quince and on the natural stock. It adapts itself to all forms, but its true place is as a standard on the Pear.

CITRON DES CARMES (*syns.*, *Madeline*, *Poire Précoce*, *Gros Saint Jean*, *Sainte Madeleine*, *Saint Jean*).—Of ancient, unknown origin. The fruit is small, nearly spherical and almost as wide as high. The stalk is fairly long and stout, swollen at the base, curved, set in a wrinkled and scarcely perceptible cavity. The eye is of fair size, open, set level with the fruit in a small wrinkled depression. The skin is smooth, yellowish-green, stippled grey, with some tawny stains. The flesh is white, juicy, and slightly aromatic. A fairly good fruit, ripening July. The tree is of moderate vigour and very fertile. In cultivation this variety is ill adapted to regular forms; it is specially recommended as a standard on the Pear.

CLAPP'S FAVOURITE (*syn.*, *Favorite de Clapp*).—Originally obtained by Mr. Thaddeus Clapp, of Dorchester, Massachusetts, U.S.A. The fruit is large, rarely pyriform, the stalk short, stout, fleshy, set obliquely in a slight fold; the eye medium sized, half closed, set in a narrow, shallow cavity, wrinkled and ribbed at the edges; the skin smooth, greenish yellow, strongly washed with purple-red, carmine on the sunny side, stippled with red; the flesh is white, juicy, and aromatic. A very good fruit, ripening August. In cultivation this variety can be grafted on the Quince and the natural stock, and adapts itself to all forms; nevertheless, double grafting is advisable if established on the Quince.

COMTE DE CHAMBORD.—Originally found a few years ago by M. Eugène des Nonhes at Nantes. The fruit is medium sized, as wide as high, the stalk of medium length, stout, the eye closed or half open, in a wide and rather wrinkled depression; the skin yellow, slightly mottled dull red on the sunny side, much mottled with smooth brown, the flesh white, juicy and aromatic. A very good fruit, ripening from September 15 to October 15. In cultivation this variety should be grafted on the Pear for preference, and lends itself to all forms.

COMTE LELIEUR.—Originally found in 1865 by MM. Baltet frères. The fruit is of fair size, often embossed at the insertion of the stalk; the stalk is long and not greatly swollen at the point of attachment; the eye medium sized, with sepals small and connivent and set in a shallow cavity; skin water-green, stippled brown and changing to yellow, always washed with rose-carmine, with tawny spots on the sunny side; the flesh white, delicate, very juicy. A very good fruit, keeping ripe for several weeks without turning off or losing its qualities. Ripens September to October. The tree is vigorous and fertile. In cultivation this variety is well adapted for medium and small forms in a good exposure.

CONSEILLER À LA COUR (*syns.*, *Conseiller de la Cour*, *Maréchal de la Cour*, *Duc d'Orléans*).—Obtained originally by Van Mons in 1840 and

dedicated by him to his son. The fruit is of fair or medium size, the stalk long, slender, curved, set almost straight on a small, rather bumpy cavity. The eye is small, open, set in a regular shallow and wide cavity; the skin rough, thick, yellow-green, stippled grey on the sunny side, which is washed with dull tawny red. The flesh is white, juicy, acidulate (sometimes too much), passably aromatic. A fairly good fruit, ripening October. The tree is vigorous and fertile. In cultivation this variety, almost as vigorous on the Quince as on the natural stock, is suitable for all forms upon both stocks. It is rarely that the soil suits it sufficiently to produce a good fruit.

CURÉ (*syns.*, *Belle de Berry*, *Belle Eloise*, *Bon Papa*, *Comice de Toulon*, *Vicaire de Winkfield*).—Found originally in 1760 by M. Leroy, curé of Villiers-en-Brenne, near Clion (Indre). The fruit is large or fair sized, elongated, the surface irregular, taking the Saint Germain or calabash shape. The stalk is stoutish, of medium length, swollen at the base, curved, set rather obliquely. The eye is large, open, filling a narrow and bumpy cavity. The skin is smooth, thick, yellow-green, mottled black and green, slightly tinged pale red on the sunny side, slightly mottled with russet, forming a line from the base to the summit of the fruit. The flesh is white, juicy, and sometimes endowed with an agreeable aroma. The fruit fairly good, and for cooking very good; ripens November, December, and January. The tree is very vigorous and of great and sustained fertility. In cultivation this variety may be grown on the Quince and on the Pear, and trained to all forms, even standards. It likes a warm soil and exposure in order that the fruit may acquire good quality.

DE L'ASSOMPTION (*syn.*, *Beurré de l'Assomption*).—Originally got in 1863 by M. Riullé de Beauchamps near Nantes. The fruit is large or very large, variable in shape, sometimes turbinate, long and obtuse at the base, sometimes rather cylindrical and narrowed. The stalk is stout and fleshy, set in a narrow cavity and surrounded by bumps. The eye is fairly large, open, regular, in a fairly deep wide cavity, surrounded by unequal bumps. The skin is brilliant yellow, abundantly mottled with light tawny red. The flesh is whitish, rather green under the skin, tender, very juicy, and fairly aromatic. A good fruit, ripening August. The tree is vigorous and fertile on the Pear and on the Quince. In cultivation this Pear grows well on the Quince, and forms handsome, regular pyramids.

DELICES DE LOWENJOU (*syns.*, *Dr. Gall*, *Jules Bivort*).—Obtained originally by Van Mons about 1836. The fruit is medium or fair-sized, pyriform, rather higher than wide. The stalk is fairly long, slender, swollen at the two extremities, oftenest set obliquely in a shallow and irregular cavity. The eye is medium sized, open, set in a wide shallow cavity. The skin is delicate, at first a bronzy green, changing to golden-yellow at maturity, spotted and stippled brown-red, washed orange on the sunny side. The flesh is whitish, very juicy, and richly aromatic. A very good fruit, ripening October—November. The tree is of normal vigour on the Quince, of great and sustained fertility. In cultivation this variety bears very freely. It is good for the sake of a lasting tree to graft it on the natural stock. It may be cultivated in all forms.

DELICES D'HARDENPONT (*syn.*, *Archiduc Charles*).—Obtained by the Abbé d'Hardenpont in 1759 in his garden at Porte d'Avré, Mons, Belgium. The fruit is fairly large, of Bon Chrétien shape, rather narrowed towards the base, where it is slightly hollowed, widely depressed at the top. The stalk is of medium strength and length, set rather obliquely in a little cavity. The eye is very variable, sometimes medium, regular, and set in a superficial cavity, sometimes smaller or larger, irregular, in a cavity more or less large. The skin is citron-yellow, with brown stippings and stains, very slightly stained light red on the sunny side. The flesh is white, unctuous, very juicy, and more or less aromatic according to soil. A good or very good fruit, ripening Oc-

tober—November. In cultivation this variety is generally at home in cool soils, in which the fruit acquires more sugar and aroma.

DES CANOURGUES.—Originally found by M. Lauzeral, of Monastrer, Tarn, in a hedge of his domain. Des Canourgues, more than sixty years ago. The fruit is small. The stalk is short, weak, curved, set in a not strongly marked crease. The eye is small, closed, in a slightly wrinkled depression. The skin is straw colour, strewn with small dots, shaded or streaked with pale rose colour at the sunny side. The flesh is white and very agreeably aromatic. A very good fruit, ripening July—August. In cultivation this variety on the Quince may be trained to small forms, but it is specially good as a standard on the natural stock, on which it is vigorous. The fruit should be gathered at intervals.

DES URBANISTES (*syns.*, *Bourré Drapiez*, *Bourré Picquery*, *Coloma d'Automne*, *Louis Dupont*, *Louise d'Orléans*, *Urbaniste*).—Obtained originally in the garden of the Urbanists at Malines about 1783. The fruit is medium sized, turbinate and regular in contour. The stem is thick, unctuous, light green, passing to bright yellow, stippled and mottled and slightly stained bronze, sometimes rosy on the sunny side. The stalk is of medium length and stout, especially at the extremities, set in an oblique crease. The eye is medium sized, open, in a narrow shallow cavity. The flesh is white, juicy, and agreeably aromatic. A very good fruit, ripening October—November. In cultivation this variety grows well on the Quince. It is useless to graft it on the natural stock, as then it grows too strongly.

DOCTEUR JULES GUYOT.—Obtained in 1870 by MM. Baltet frères. The fruit is large, pyriform, or rather a calabash shape, often ribbed near the eye. The stalk is of average stoutness, turned aside by a pronounced spur. The eye is medium-sized, open, in a little perceptible depression. The skin is green, quickly changing to citron-yellow, finely stippled, often tinged rose on the sunny side. The flesh is juicy, refreshing, and agreeably aromatic. A very good fruit, ripening the second fortnight of August. The tree is moderately vigorous on the Quince, very fertile even in early age. In cultivation this variety, vigorous on the natural stock, is suitable for the fruit garden under all forms and in all exposures.

DOYENNE BLANC (*syns.*, *Bourré Blanc*, *Bourré Blanc d'Automne*, *Bonne Eute*, *Carlisle*, *Citron de Septembre*, *De Linion*, *De Neige*, *Doyenné du Seigneur*, *Saint Michel*, *Valencia*).—Of ancient and unknown origin. The fruit is medium-sized, rounded, the stalk stoutish, short, straight, slightly inclined in a shallow cavity. The eye is medium-sized with connivent sepals set in a shallow, wide, and regular cavity. The skin is thin, unctuous, very smooth, citron-yellow, stippled and spotted brown, shaded orange on the sunny side. The flesh is white and distinct in aroma. A very good fruit, ripening September—October. The tree is of medium vigour on the Quince, of great and sustained fertility. In cultivation, though delicate, this variety succeeds in all forms, but requires a rich, well-drained soil and a good exposure, east or west for preference.

(To be continued.)

Strawberries President and Keens' Seedling.—The criticism on my note by "D. T. F." is more captious than useful, I think, for I mentioned the fact that my soil was "cold and ungenial." The precise locality I write from has little to do with the question, but if it interests "D. T. F." or any other reader, it is in West Suffolk, not far from the old town of Bury St. Edmunds, and very close to where my critic spent many years of his career. "D. T. F." wishes to know also what I found wanting in Keens' Seedling. First, it is not free bearing enough, plenty of fruit numerically being produced, but they are too small for my requirements, and I have to make the most of my ground. Again, though "D. T. F." apparently thinks otherwise, the flavour is not good, falling very far behind two favourite varie-

ties of mine—Monarch and Leader. Its constitution is not of the best, so though I regret to have to disagree with "D. T. F.," I must still go on growing what I find suits my soil best. I did not say that Royal Sovereign had superseded President and Keens' Seedling generally in the west. I said that a grower of my acquaintance had discarded President in favour of the large kinds, of which Royal Sovereign is typical. "D. T. F." seems to have read in my note some things that were not there and to have missed other sentences that were.—H. R.

ROSE GARDEN.

ROSES IN AUGUST.

GENERALLY speaking, August is a very dull month in the Rose season, but during the last two or three dry summers it has been more than usually wanting. It is true the Teas and Hybrid Teas and Chinas are rarely out of flower from June to November, but yet even with these there is a lull as it were during these dog days. It is not to place on record what is patent to every gardener that these lines are penned, but rather to offer a suggestion to remedy to a certain extent this dearth of blossom between the summer and autumnal display. What I would advocate is that a goodly number of the Tea-scented and Monthly Roses be planted as late in the spring as possible. I have found the third week in April none too late provided the plants had been, as it were, prepared for such planting. This preparation consists in either lifting plants already in one's possession or purchasing some new stock, and then carefully heeling them in under a north wall or hedge until the time for re-planting, as already alluded to above. The heeling in must be carried out thoroughly. A trench should be opened about 1 foot deep and some nice fine soil must be in readiness to shake amongst the fibrous roots of the Roses. The roots, which are usually those of the seedling Brier, are often as long as Parsnips. It is a great mistake to mutilate them at this time of the year, reserving this operation until the spring. In heeling in, the roots must not be cramped in any way; consequently a good deep trench is advisable. Apart from the advantages accruing from this transplanting, we have the plants under our control more effectually should a severe winter set in. Nothing is better than earth as a protection from frost. I should not object to bury the plants in it if I could be sure when a hard frost was coming, but, unfortunately, one has such little warning; consequently the fine soil necessary is not always procurable. Where conditions of soil and climate are favourable to those Roses emanating from *R. indica*, I would not advise the whole quantity to be annually transplanted, but in order to obtain a goodly number of blooms in August, it would be better to purchase a sufficiency of plants for the purpose early in autumn and heel them in as advised, the established plants being taken in hand every third year; or, what is better, transplant a third of the total number every year, not for what I will term the August display, but in order to keep the plants in a healthy condition. I have great faith in this transplanting both for standards as well as bushes. It enables the grower to properly enrich the ground, and the aëration the soil perforce must receive is also beneficial. What a boon trenched land is in dry seasons! I have had ample evidence of it this summer, and I feel convinced that many of the insect and fungus pests would be in a great measure obliterated from our gardens if our Roses were more often rejuvenated by

triennial transplanting. No better evidence could be obtainable than a specimen pot Rose. In this case it is annually disturbed when repotted, and what fine specimens such plants will make, yielding quantities of good exhibition blossoms.

To be successful with late planting three points must be remembered. (1) Never allow the roots to be exposed to wind or sun. When about to plant take a few from the trench as required, keeping the roots well covered with soil or mats until wanted. (2) Trim the roots slightly, then dip them into some thin mud or, as it is technically termed, puddle. This puddle can be prepared by digging out a hole in the ground close by; throw into it some fine loamy soil, then add water until a moderately thin mud is produced. (3) Plant these Roses on a really good piece of land that has either been trenched not more than twelve months before or a few weeks previous to April, and when planting, work in some well-decayed cow manure. The plants are moderately pruned before planting. Beyond this little pruning is needed, and as soon as roots become active some fine strong growths will commence to break from the base of the plants that about the time stated are crowned with lovely heads of bloom, the more so if the surface is kept constantly hoed to conserve the moisture and occasional doses of water and liquid manure afforded.

PHILOMEL.

Rose Celine Forestier.—I was very glad to see "Grower's" note (p. 95). Like him, I have often wondered Celine Forestier is not more grown. We have no Rose like it in colour, none more useful in season, and the free-and-easy method of culture and training seldom fails in producing a long succession of fresh and pleasing blossoms. It looks superb in a sheltered border or lawn, with plants of white Aimée Vibert in tall bushes or pyramids behind. I agree with "Grower" that it is often a mistake to grow Celine Forestier on a wall. It is often grown there because of its supposed tenderness. As a Noisette there is something in that, but it is less tender than the Maréchal or Lamarque, and with a free head to protect it it seldom takes any harm. In exposed localities Celioe Forestier does well, and looks, perhaps, its very best running wild up Yew trees, the soft sulphur-yellow contrasting well with the dark green supporting branches of the Yew. In warmer beds and borders dwarf bushes, little or not at all pruned, yield a rich and long succession of soft golden blossoms.—D. T. F.

Rose Caroline Testout.—Those who have only seen this Rose at shows shorn of its buds are probably at a loss to understand why it is praised so much, but they have only to see it growing as a bush, pillar, or standard when they will come to the conclusion that not one word too much has been advanced in its favour. I have never seen a really good bloom of it staged. Its form is somewhat against its general adoption as an exhibition flower, although it was much in evidence this year at the Crystal Palace Rose show, there being on that occasion something like 170 blooms exhibited. Only one other Rose was shown in greater numbers, and that was Mrs. John Laing, with 370 blossoms to its credit. The lover of garden Roses cares very little about form. He can appreciate the vigour of growth, the delightful tint of salmon-pink colour, the easy disposal of the exquisite and immense shell-like petals, and the profusion and continuity of blossom. It is a pity this Rose is not more fragrant. There is a perfume, but nothing like that of our ideal sweet-scented variety La France. Caroline Testout is grand as a pot Rose. Under cool treatment its blooms develop so slowly that they assume very large proportions, equal in this respect to any variety cultivated. It will probably stand out as the Rose of the decade, and is

likely to have many descendants, for raisers are already obtaining from it some interesting hybrids.—P.

NOTES AND QUESTIONS.—ROSES.

Rose Tennyson.—I was pleased with this fine novelty as shown at the hybrid conference at Chiswick. Not even in the torrid heat or the extra trial of being staged in a conservatory did its flowers exhibit signs of fading. Towards evening they appeared almost as fresh as they did in the morning. There are not many Roses that can stand such extreme heat, and it speaks volumes for the value of this Rose to the exhibitor. The flowers are of a lovely pearly white shade and the form superb, the outer petals pointed and the centre high and globular.—VISITOR.

Rosa anemonæflora.—Distinct both in leaf and flower, this is certain to have many admirers. The foliage is elegant, long, lance-shaped and of an ash-green colour. There are many Roses worth growing for their foliage alone, such as *R. lucida*, *R. Watsoniana*, &c., and the above kind might be included, but it has also a very interesting Anemone-shaped flower, pure white in colour but very small, not larger than a sixpence. This variety grows well and is almost a climber. I cannot pronounce upon its bardiness. Coming from China, it may be too tender for our climate outdoors in winter.—P.

Rose Robert Duncan.—The weakest point in this is perhaps colour. This is usually a shade known as rosy lake, but at times, especially early in the season, the older flowers assume a rather objectionable dull magenta tint. Perhaps this defect is owing to the season. This Rose grows well and produces a splendid truss of bloom upon each shoot, averaging as many as ten buds and blossoms. This is rather unusual for a Hybrid Perpetual, and I imagine that there must be some Tea blood in the variety, for at the base of the petals a distinct yellow shading is visible. As to form, Robert Duncan resembles a *Camellia*.

Rosa Wichuriana.—Although this is a creeping Rose, it nevertheless makes a delightful pillar variety. During the first fortnight of August the plants flowered most beautifully, having the appearance of the pretty single white Macartney Rose. A lovely feature would be to train *Rosa Wichuriana* over an old tree stump or conical-formed mound of roots in a conspicuous part of the grounds. The tiny shining Berberis-like foliage looks cheerful at any time, but when the white star-like flowers are open the foliage and flowers contrast most happily. It is yet too early to speak of the hybrids of this Rose. They grow most luxuriantly, and if they only flower as well they will be valuable.

Rose Sir Rowland Hill.—This sport from Charles Lefebvre was thought much of when it received the gold medal of the National Rose Society about ten years ago. It is true the colour is very novel, a rich velvety plum shade, but there is a tendency in the older blooms to die off a dull purple that is not at all pleasing. Towards autumn, however, this variety becomes less purple, then it is most beautiful. If one cares for this shade of colour I think he would find Jean Cherpin more interesting, and it yields some lovely buds when it first opens. For exhibition Sir R. Hill is useful, being very distinct, and when the season is suitable to that grand dark variety Charles Lefebvre, the Rose under notice is sure to be in fine form.—P.

Red Rosee for Christmas.—These would certainly be highly valued at such a season, and it is quite possible to have some provided one has plants established in pots. The best kind to grow to give long stems is Ulrich Brunner. The plants should now be dried off for five weeks and pruned at the expiration of that time. A steady temperature should be maintained at first, increasing it as the plants advance in growth. Do not set the plants too thickly together, for during November and December all the light available must be given, removing the plants to a lean-to house with a southern aspect for this purpose. Gardeners should put up a lot of this Rose in October. They would come in useful at different periods of the year, but at no time are red Roses so much prized as at Christmas.—A GROWER.

Rose Duchesse d'Auerstadt.—This splendid climber, more vigorous than *Rêve d'Or* if that were possible, although not such a profuse bloomer, is very valuable for its intense yellow colour. The buds are pure yellow when opening, but the full-blown flowers have a large amount of nankeen-yellow pervading the centre petals, and the outer ones are of a

peculiar shade known as citron-yellow. When growing luxuriantly the foliage is very handsome and glossy. In favourable localities this fine Rose should find a place either on a south or west wall, preferably the latter, but I fear it would be too tender for a very cold district. Mons. Pernet-Ducher has utilised Duchesse d'Auerstadt as pollen parent for his new Rose Billard at Burré. It seems a very promising climber, the seed parent being the Hybrid Tea Alice Furon.—P.

KITCHEN GARDEN.

WINTER CUCUMBERS IN POTS

MANY are unable to grow winter Cucumbers, and if they are grown for profit it is certainly a crop I would fight shy of, as the produce is uncertain. Having to provide Cucumbers all the year round, I have tried various ways, but so far my greatest success has been obtained by pot culture. I do not advise pots in all cases. Mine succeed because I have a peculiar climate in the winter and much moisture in the shape of fogs, and very little sunshine. By getting the pots full of roots by say the end of October I can in a measure be independent of the weather. No matter how winter Cucumbers are grown, I find it essential to secure a strong plant before the short days come in.

For winter work there is less choice of varieties than in summer, and so far I have found Syon House and Telegraph reliable. The latter is the better shaped fruit, longer and smoother, but not superior as regards cropping or quality. This year I hope to give the new Every Day Cucumber a trial. This was shown well last winter and promises to beat the useful Telegraph. Cardiff Castle is also an excellent winter fruiter and very prolific. Many prefer it. Some large growers have selections or crosses from good kinds that are known to do well. The raising of the plants should not be deferred long after August is in, as there should be a fair season's growth before fruiting commences. I raise two sets of plants. One I crop freely in the early autumn, and from the other I take but few fruits till November. This allows of the trellis being well filled with wood. When I begin to feed in the late autumn the plants respond quickly and fruit through December to March—the most critical period of the year. Of course, for the early autumn supply pot culture is not advised, but much depends upon the locality and the houses. I do not use large pots; 12-inch are sufficient. These I plunge in a warm manure-bed in addition to hot-water pipes, as I find the manure encourages new surface-roots, and so long as these are produced freely the growth is strong and fruitful. The plants raised now will be ready to place in their fruiting pots a month hence—that is early in September. The pots are stood in position over the pipes on some thick turf-sods, and a little rough rubble placed directly over the pipes. The pots are about half filled at the start, and the materials are added to as growth increases. This is much better than having the soil nearly up to the rims, as the new roots made are surface-roots. By the end of October some rough turf may be placed round the pot rims just on the edge and new materials or surface-dressings given. I also grow some plants on a shelf at the back of the house. These have no bottom-heat whatever. The crop from these is valuable, as when fruits are needed daily they are acceptable. Strange to say, these plants near the roof with much less heat pull through a long period of fog better than those in a better position. This I attribute to their having been grown with more exposure and more air. For

these I use 10-inch pots, this size being ample. I find a high night temperature harmful, especially in foggy weather; indeed then I lower the day temperature also. Seventy degrees is a good day temperature in midwinter, with 5° to 10° lower at night in severe weather. In pots a short-jointed growth is secured. The best food I find is liquid manure, with alternate supplies of soot water. Avoid crowding the growth at the start, it being an important point to get well regulated leaders to cover the allotted space, as from these later shoots in abundance will be needed to keep up a succession of fruits. G. WYTHES.

Pea Sharpe's Queen.—I fully agree with the remarks of "H." (page 76) on the merits of this fine, but I think by no means generally known Pea. When living in South Notts I used to see very fine samples of it at the various local exhibitions. It was very much grown by cottagers, which is pretty good proof of its profitability. I grew it myself, and found it not only first rate as regards cropping, size and handsomeness of pod and flavour, but of just the height and habit of growth most gardeners like. As "H." says, it is of very branching growth and must not be sown too thickly. Sharpe's Queen is, I believe, a great favourite throughout Lincolnshire, and I remember judging at one cottagers' show where there were probably a couple of dozen dishes of it exhibited.—J. C.

Tomatoes for market.—The present season has thus far been very favourable for the Tomato. I do not remember a season when the demand has been so brisk, that is, if the Tomatoes are of the right kind for sale. Unlike many other crops, the very large fruits are not nearly so much in demand as the medium-sized fruits. The purchasers want bright crimson Tomatoes, of smooth outline, rather under than over a quarter of a pound each. Those who have this class of Tomato have lately had a difficulty in supplying customers, while those who have large, coarse fruits have a difficulty to find purchasers even at a lower rate. Those who have grown the much-vaunted Peach Tomatoes, or yellow-skinned ones, can hardly get purchasers at all. The one thing that Tomatoes need to ensure good crops, in addition to bright sunshine, is fresh soil, for they do certainly take all the nourishment out of it to such an extent that simply digging in a lot of manure, as one does for other crops, does not have the desired effect. Outdoor crops are doing well, and I am getting some well-coloured fruit from warm spots. I find that Tomatoes set their fruit and keep much healthier, even in such dry seasons as the present, with very little artificial watering, for they have such voracious roots, that they seem able to extract every particle of nourishment from the soil for some long distance around the stem, the roots being nearly as strong as whipcord.—J. G., Gosport.

NOTES AND QUESTIONS.—KITCHEN.

Potato Carter's First Crop.—Anyone requiring a first-class short-topped early Potato should try the above. I have grown it for two seasons and have been highly pleased with it. Another season I intend it to take the place of Ringleader.—T. COCKERILL.

Potato Ninety-fold.—This Potato is turning out well with me this season. There is an excellent crop of large tubers, and when cooked they are everything that could be desired. The only fault that I have to find with Ninety-fold is its having such a strong t.p. This season it has made a growth 3 feet high.—THOS. COCKERILL, Wirksworth, Derbyshire.

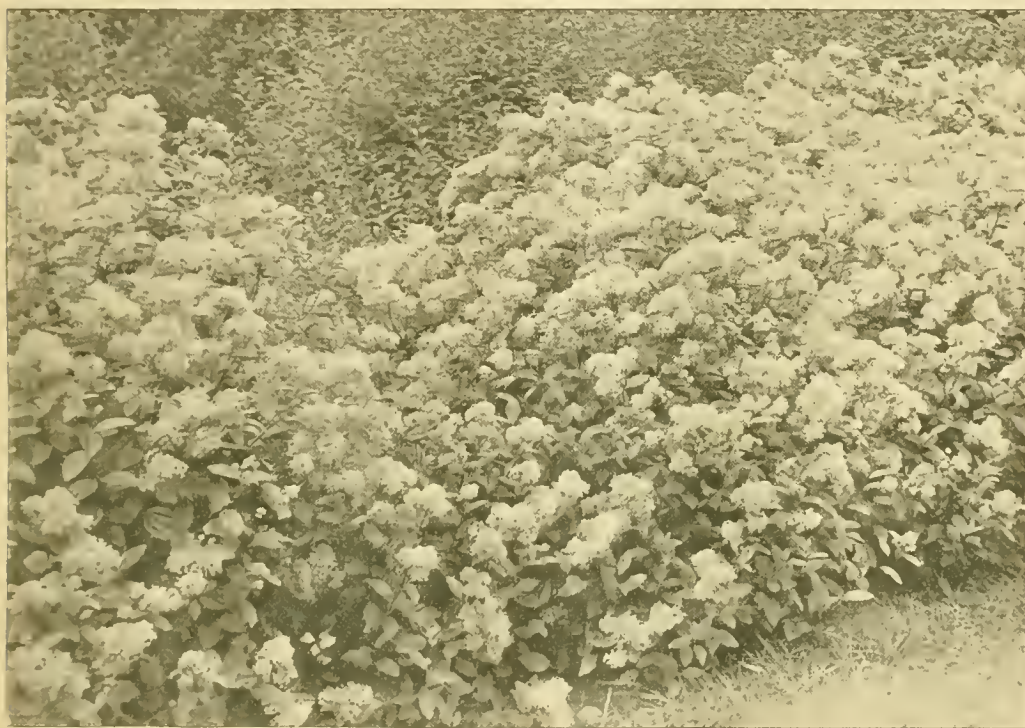
A dwarf Ne Plus Ultra Pea.—"J. S." and no doubt other readers will be glad to hear that there is a dwarf wrinkled Marrow Pea—the East Anglian, growing about 2½ feet—yielding capital Peas equal to Ne Plus Ultra, a Pea that has not been beaten for produce or quality. Any East Anglian seedsmen could supply it true, and in fertility and quality it is so identical with Ne Plus Ultra as to be sold for the dwarf strain of the same.—D. T. F.

TREES AND SHRUBS.

CEANOTHUSES.

ALTOGETHER there are between thirty and forty species of *Ceanothus* known, all of which come from the New World and to the north of the Isthmus of Panama. The greatest aggregation of species occurs in California, whence most of the showier species at present cultivated in the British Isles have been obtained. There the *Ceanothuses*—according to Professor Greene, a well-known authority on the flora of Western North America—constitute a large part of that “almost impenetrably dense brushwood called ‘chapparal’ which covers the middle elevations of the Coast Range and forms a distinct belt between the herbaceous vegetation of the foot-hills and the forest growth of the highest ridges and summits.” Thus they constitute, especially when in flower, one of the most striking and characteristic features of

The flowers of all the *Ceanothuses* are individually very small, but they are densely crowded on numerous racemes. A curious feature of the flower is the petals. These are narrowed to a stalk at the base, but the outer portion has the shape of a hood. *Ceanothus* is one of the comparatively few genera in which species with alternate and others with opposite leaves occur. The venation of the leaves is also a character that is used to differentiate the species; in one set the leaf is feather (or pinnately) veined, whilst in another it is distinguished by three prominent veins running lengthwise. The greater part of the *Ceanothuses* are not strictly hardy even as far south as Kew, but all those mentioned below can be grown on a sunny wall. Even then a winter occasionally comes which severely injures the more tender ones. The requirements of *Ceanothuses* under cultivation may, indeed, be inferred from the fact that most of them come from California. They revel in abundant warmth and sunlight, which is why under our



A group of *Ceanothus americanus* in the Royal Gardens, Kew. From a photograph by Geo. Champion.

the Californian flora. But the genus is represented also on the eastern side of the continent, and reaches as far south as Guatemala. What is, perhaps, the most useful of all the species (*C. azureus*) is one of the few shrubs native of Mexico that can be grown in the open air in England. All the cultivated species are shrubby, although two species (*thyrsiflorus* and *arboreus*) are occasionally met with in a wild state as trees, and they are included as such in Sargent's “*Silva of North America*.” As garden plants *Ceanothuses* are valuable for the distinct and delicate beauty of their flowers; being mostly of some shade of blue, they provide us with one of the rarest colours among hardy shrubs. They are valuable also for the season at which some of them flower. Of the shrubs in bloom at the present time (early August), the genus *Ceanothus* certainly furnishes some of the most beautiful ones.

duller skies they are seen at their best on a sunny wall. At the same time, *C. azureus* and *C. americanus*, as well as the valuable race of garden forms that have been raised from them by selection and intercrossing, thrive admirably in the open, and are very useful for planting in large beds or masses. Those species and varieties that flower in spring or early summer should be pruned back as soon as they are out of bloom. The later autumn-flowering ones should be pruned in February. All of them can be increased by cuttings or layers.

The following is a list of the species here mentioned. It includes most or all of those likely to be of value in gardens here, although others have been introduced. All except those marked * should be given wall treatment in districts with a winter climate similar to that of Kew.

I.—OPPOSITE LEAVES.

**Cuneatus* *Rigidus*

II.—ALTERNATE, THREE-VEINED LEAVES.

**Americanus* **Ovatus*
**Azureus* *Thyrsiflorus*
Divaricatus *Velutinus*
Integerrimus

III.—ALTERNATE, PINNATE-VEINED LEAVES.

Dentatus *Veitchianus*
Papillosus

C. AMERICANUS (New Jersey Tea).—Coming from the eastern side of North America, this species naturally became known to European cultivators sooner than those of the western side. It was, indeed, the first *Ceanothus* seen in Europe, and, according to Aiton, was introduced in 1713. As an ornamental shrub it does not equal the best of the garden varieties and hybrids, which have, however, been partly derived from it. Still it is not without beauty, flowers freely, and is quite hardy. It grows 3 feet to 4 feet high, and has ovate or heart-shaped, three-veined leaves 2 inches to 3 inches long, downy beneath, and toothed at the margin. The flowers are of a rather dull white, and are crowded on long-stalked racemes that spring from the leaf-axils near the ends of the branches. It flowers from the latter part of June till the beginning of September, and has an extensive distribution in Canada and the Eastern United States, frequenting open woods. During the revolutionary war the American troops drank an infusion of its leaves, which possibly gave rise to the popular name by which it is known. *C. ovatus* (or *C. ovalis*) is nearly allied to *C. americanus*, but has smaller, more glabrous leaves, these being each 1 inch to 2 inches long, narrow oval, and not heart-shaped at the base. Flowers white. A native of Eastern N. America.

C. AZUREUS.—On the whole it may safely be said that this species, if not the handsomest, has proved in Europe to be the most useful and important of all the wild *Ceanothuses*. It is quite hardy in the south of England, and to its influence more than to that of any other species is owing the beauty of the numerous garden varieties that have been raised, chiefly by the continental growers. It is a native of Mexico, where it is widely spread, one of its sites being the slopes of the volcano Popocatepetl. It is said to attain a height of 10 feet, but I have not seen it so high in the open ground; as a rule it ranges from 3 feet to 5 feet, forming a compact bush. The flowers, of a charming light blue, are densely arranged on long racemes. In general appearance it bears a resemblance to *C. americanus*, but even when out of flower it can be distinguished from it by the smaller oblong leaves, those of *C. americanus* being ovate and much the broadest towards the base. Under this species may be mentioned the garden varieties, which, as stated, have been in a great measure raised from it and *C. americanus*, either by selection or by hybridising with each other or the Californian species. Many of these varieties (of which there are scores already named) are great improvements on either *azureus* or *americanus*, and the flowers vary in colour from white to blue and rose. Some are dwarfier; others have finer foliage. They flower between June and September.

C. GLOIRE DE VERSAILLES.—This is one of the best and hardiest of *Ceanothus*, and at present perhaps the most popular. It is a seedling from *C. azureus* raised by Mons. Christine, of Versailles. It bears large clusters of rich blue flowers over a long season, and has fine foliage and a vigorous habit.

C. VIRGINAL.—Not so strong a grower as some, this is useful for the whiteness of its flowers, which are purer than in any other variety I know.

C. SCEPTRE D'AZUR.—A strong grower, with fine foliage and spikes; blue.

C. CERES AND *C. CARMEN*.—Both raised by Lemoine, of Nancy; rose coloured.

The names of Lemoine, of Nancy, and Simon-Louis frères, of Metz, are most prominent in connection with the raising of new *Ceanothuses*. Their catalogues should be consulted by intending planters.

C. CUNEATUS.—Except that it is quite hardy and evergreen, there is little to be said in praise of this species as a shrub for our gardens. In those parts of California where it most abounds it appears to be a pest. According to a Californian writer in *Garden and Forest* (Mr. G. Hansen), "it clothes hillsides for miles and gives them a greyish green tint. Wherever man has done any cultivating, cleared an old wood-road, cut a trail, ploughed a furrow in years past, or still keeps cultivating, this *Ceanothus* follows him like the Nettle or Chickweed." In a similar way *Coriaria myrtifolia* (which needs some care in this country) is the first plant to overrun the terraced vineyards of Southern France when they are abandoned. *Ceanothus cuneatus* is an erect, rather straggly-branched shrub 4 feet to 6 feet high. The leaves are opposite (one of the few instances in this genus), half an inch or so long, wedge-shaped, rounded at the apex, and of leathery texture. The flowers are in short corymbs and are dull white or slightly tinged with blue.

C. DENTATUS.—Although allied to *C. papillosus* (being one of the species whose leaves are alternate and pinnately veined), this is distinguished by its leaves being smaller (quarter of an inch to 1 inch long), not warted, and in their margins being more revolute. The flowers, of a somewhat brighter blue, are in smaller roundish clusters. It blooms in May and June. William Lobb introduced it from California for Messrs. Veitch about fifty years ago, and it was figured in the *Botanical Magazine*, t. 5810, as *C. Lobbianus*, but as in several other instances where plants were named in honour of that fine collector, this name had to give place to an earlier one.

C. DIVARICATUS.—Like several other fine *Ceanothuses*, this species first reached cultivation by means of the Horticultural Society, seeds having been sent to the garden in 1841 by Mr. R. B. Hinds, at one time a surgeon in the Royal Navy. It is a native of California, from the extreme south of which State it extends northwards up to Oregon. It is a nearly glabrous plant, and has oblong-ovate, three-nerved, very glossy leaves that are half an inch to 1½ inches long. The flowers appear in slender racemes 1 inch to 4 inches long, and are pale blue or almost white. It is said to grow 10 feet high at Monterey, in California. In this country it has to be given the shelter of a wall. On an old wall at Kew it is quite 10 feet high, and its stem near the ground is quite 6 inches in diameter. It blossoms in May and June.

C. INTEGERRIMUS.—Discovered by David Douglas in 1833, this species appears not to have reached cultivation until about twenty years after. It was, at any rate, raised from seed by the Royal Horticultural Society, and flowered at Chiswick in 1856. It is a native of the Sierra Nevada of California and other parts of Western North America. It is said to average about 10 feet high in California; here on a wall it is somewhat dwarfed at present. Its branches are terete (in some of the *Ceanothuses* they are distinctly angled), and the short-stalked, dull, glaucous leaves are each 1 inch to 3 inches long, three-nerved, ovate or oblong, the margins not toothed. The flowers are in cylindrical or roundish clusters, a number of which go to form a large panicle, terminating each branch; they are white or tinged with blue, and appear in June. It is not so hardy as azures, but still survives all but the very hardest frosts if given a sheltered spot. In some parts of California it is known as the Deer Bush, owing to the deer-feeding on it when driven down from higher altitudes by stress of weather.

C. PAPILLOSUS.—Like the preceding species, this was discovered by Douglas in California, but it was later introduced by Wm. Lobb when collecting for Messrs. Veitch. It is a very distinct *Ceanothus*, and although not hardy in the open it is a singularly beautiful plant for a wall. There is on a wall at Kew a magnificent specimen 10 feet high and 20 feet in diameter, which is a glorious picture every year in May and June. Its branches are very downy and hairy, and its leaves are pinnate-veined, narrow-oblong, half an inch to 2 inches long, and render the species distinct by the numerous wart-like excrescences on the upper surface. Their dark green and very lustrous upper surface makes the shrub handsome and striking at all times. The flowers are clustered densely on short racemes and they are of a charmingly delicate blue. The species inhabits the coast ranges of California from Monterey to San Francisco.

C. RIGIDUS.—Although belonging to the same group as *C. cuneatus* and having, like that species, opposite leaves, this is a much more beautiful shrub. On the other hand, it is not so hardy and needs the shelter of a wall. It is a plant of erect growth with rigid, woolly branches and short, stiff, wedge-shaped or obovate leaves a quarter of an inch to half an inch long, coarsely toothed at the broad apex. The flowers are of a fine purplish-lilac, and appear on short, but numerous clusters during April, May, and June. Hartweg when collecting for the Horticultural Society was the first to introduce this *Ceanothus*. It had, however, been previously noticed by David Douglas. It is a Californian species, and, like several others, is abundant near Monterey. It is one of the most distinct in general appearance. At Kew it is represented by a specimen 7 feet high growing against a wall.

C. THYRSIFLORUS (Californian Lilac).—Of all the species that we can grow out of doors in England this is the one that attains the greatest size in a state of Nature. It is described as sometimes a shapely tree 25 feet or more in height. Climatic conditions will prevent it assuming more than shrubby dimensions in this country (except perhaps in Cornwall and such like places), but it will cover a high wall, and even in the open grows with remarkable freedom till a frost comes that is too much for it. It was discovered by Eschscholtz in 1816, and was introduced in 1837 by the Mr. R. B. Hinds already mentioned. It is a native of the coast ranges of California from Humboldt County to Monterey. Its branches are distinctly angled, and the leaves each three quarters of an inch to 1½ inches long, three-veined, strongly toothed, smooth and glossy above, greyish beneath. The flowers, of a charming bright blue, make a display from June till autumn; they are borne densely on compound racemes. To be safe, wall space should be afforded this plant.

C. VEITCHIANUS.—This is one of the very finest of the Californian *Ceanothuses*, but seems to be one of the rarest, for although introduced by W. Lobb when collecting for Messrs. Veitch upwards of fifty years ago, it is still unknown in a wild state. Of the other species here mentioned it comes nearest to *C. papillosus* and *C. dentatus*, having alternate, pinnate-veined leaves. These are, however, shorter and comparatively broader than in *papillosus*, not warted, and from half an inch to 1 inch long. The upper surface is smooth and lustrous. The flowers are of a bright blue, and come in dense clusters on the end of the short lateral branchlets. So abundant are they, that on a plant in full flower scarcely any leaves are visible. A wall is needed to grow this species satisfactorily.

C. VELUTINUS.—A species rare in gardens, but grown and flowered by Mr. Gumbleton near Cork. It has large ovate leaves, whitish beneath and three-veined. The flowers are whitish and borne in large panicles. It comes from California and Oregon, and is one of the more tender species. Both Douglas and Lobb sent it home.

Arboretum, Kew.

W. J. BEAN.

TREES AND SHRUBS IN BLOOM IN JULY.

ABUTILON VENILLARIUM grown against a wall has been bearing a profusion of its crimson, yellow-centred flowers, from which the maroon anthers protrude, on its slender arching shoots, and at the commencement of the month *A. vitifolium* had not entirely passed out of bloom. When grown in sheltered spots, as large pyramids 8 feet and more in height, the lavender and white-flowered varieties form charming pictures in the zenith of their beauty. The common Barberry has been thickly set with its golden blossoms, and the Strawberry Tree (*Benthamia fragifera*) was covered with its pale yellow flowers in the early days of July. The Allspice Tree (*Calycanthus*) has also come into bloom, and *Carpenteria californica* has borne its fragrant white blossoms well into the second week of the month. *Ceanothus Gloire de Versailles* is a cloud of palest blue, and many of the *Cistuses* have expanded hosts of their too fleeting flowers. *Crategus Pyracantha*, trained on cottage walls, has been covered with its white flower clusters, and the Golden Broom has gleamed brightly from the shrubberies throughout the month. *Desfontainea spinosa* has borne its pendent scarlet tube flowers amongst its Holly-like leafage, and the double *Deutzia crenata* has been white with blossom. Tall specimens 10 feet in height situated among deciduous trees along the margins of drives or standing in open glades are charming sights when enveloped in their snowy flower mantles. *Dracena australis*, though usually perfecting its inflorescence in June, was in some cases in full beauty at the commencement of July. Its fragrant flower-spikes are much appreciated by the bees, whose murmurous song pervades the surrounding air throughout the sunny hours. The Fire Bush (*Embothrium coccineum*) retained a few vermilion flower-clusters until the second week of the month, and plants of the Heath-like *Fabiana imbricata* have been pyramids of white bloom. Bushes of the *Habrothamnus* have flowered in the open, and *Hydrangea paniculata* is perfecting its massive, cone-shaped blossoms. In a particularly favoured garden *Indigofera Gerardiana*, *Metrosideros robusta*, *Piptanthus nepalensis* and *Swainsonia albilora* have flowered. *Kalmia latifolia* has borne its clusters of flesh-white, cupped blossoms, and the Jew's Mallow (*Kerria japonica*), both single and double, are still producing flower. The double form is the general favourite, and may be seen blooming in mild winters almost up to the close of the year in cottage gardens, but the single variety carries off the palm in the grace of its simple flowers. Myrtles are white with blossom and the Daisy Bush (*Olearia Haasti*) is rapidly hiding its foliage beneath its myriad expanding star flowers. An Oleander that has lived for three winters in a sheltered nook in the open is bearing its first rosy blossoms. A specimen of *Ozothamnus* that I received a few years back as *O. thyrsoides*, but which appears identical with *O. rosmarinifolius*, has now grown to a height of over 6 feet and has been a mass of fragrant white blossom, so thickly set that in the upper portion of the bush no leafage was discernible. Its flowers have the merit of retaining their freshness for a lengthened period, the inflorescence of the subject in question remaining decorative for quite three weeks.

Of the Syringas, the charming *Philadelphus mexicanus* perfected its small cupped blossoms early in July, when the large-flowered *P. speciosus* with snowy flowers over 2 inches in diameter was at its best. The New Zealand Flaxes (*Phormium tenax*), both in the green-leaved and variegated forms, have thrown up their giant flower-stems in many gardens, and in a sheltered spot the odorous *Rhynchospermum jasminoides* has been in bloom. The *Kerria*-like *Rhodotypos kerrioides* has continued to produce its single white blossoms, and the Venetian Sumach or Smoke Bush (*Rhus Cotinus*) is in bloom, and will soon enter upon the period when the feather-like

clusters that succeed the inconspicuous flowers will assume their attractive purple tint. Of the shrubby *Spiræas*, *S. Lindleyana* came into bloom in the third week of the month, followed before its close by *S. ariaefolia*, whose blossoms last in perfection a much longer period than do those of the former species. It is only when these subjects are allowed to assume their rightful proportions and to grow, unhampered by encroaching evergreens or other shrubs or trees, in deep, moist soil that a just appreciation of their natural beauty can be arrived at. When growing in isolated positions under favourable conditions they will, in the course of a few years, attain a height of 12 feet with a branch spread of 18 feet or 20 feet, and form exquisite pictures when every spray is tipped with an ivory-white plume. *S. flagelliformis*, a much earlier bloomer, was passing out of flower at the commencement of the month, when *S. bella* and varieties of *S. japonica*, such as *Bumalda* and others, were at their best. Great trees of Portugal Laurel, between 20 feet and 30 feet in height and more in diameter, were early in July smothered in their sickly sweet, white bloom-sprays, and are now decorated with flowering trails of Traveller's Joy (*Clematis Vitalba*). The Tulip Tree (*Liriodendron tulipifera*) in the early days of the month still held a few fresh blossoms of tender fawn and green, and the Weigelas were then still flower-laden. *Veronica Traversi* is a mass of pale lavender bloom spikes, while early in July the Japanese Guelder Rose (*Viburnum plicatum*) in partially shaded spots still held its snowy flower-balls. The great standard Magnolia is daily producing a fresh supply of its ivory-white perfumed chalice, and while it sweeps the ground with its lower branches has made such growth in its top-most boughs as to obliterate the disastrous effect of the blizzard of 1891 to all but those cognisant of its appearance anterior to that date.

Torquay.

S. W. F.

BUDDLEIA VARIABILIS.

IN 1894 M. Maurice de Vilmorin first introduced this shrub to the National Society of Horticulture of France as the result of some seed he had received from China, the sender being the Abbé Soulié. In the same year the species was described under the name of *Buddleia variabilis* by Mr. Hemsley, of Kew, in the Bulletin of the Linnean Society. In 1895 the *Revue Horticole* described in terms of eulogy a specimen cultivated at the City of Paris School of Arboriculture at Saint-Mandé. In the same journal in 1896, in describing some flowering specimens I had seen at Barres belonging to M. de Vilmorin and in M. Micheli's garden at Crest, I foretold that the plant would quickly make its way. Its vigour, fine leaf, and its numerous clusters of pale lilac flowers, lasting in succession throughout the summer, have, in fact, won for it favour. In 1898 an article appeared by M. de Vilmorin, accompanied by a coloured plate and an engraving, which enabled one to form a definite idea of the plant.

B. variabilis, despite the vigour of its vegetation, continuity of its bloom and the facility with which it is propagated by cuttings, is not so frequently met with in gardens as it deserves to be. One of the principal causes of this is that the flowers are open to the reproach of being a little pale. Nevertheless, I consider them to be more delicate in form and tone than those of *B. curviflora*; the habit also is more elegant. Without having the fine deep violet of the flowers of *B. Lindleyana*, as a shrub it is decidedly superior to it. The branches of *B. Lindleyana* are too fragile and often ungainly. Some recommend a rather short pruning for *B. variabilis* in order to obtain larger leaves and finer flower-clusters. With my own plants at Lacroix I have tried the direct contrary plan, i.e., not pruning at all. The result has been a great number of branches and of blooms. At the extremity of every branch a well-formed cluster develops and flowers from base to summit. The flowers wither without falling. The faded cluster is cut away and is immediately replaced

by those of the two lateral branches which accompany the terminal inflorescence. This is a sort of dichotomous pruning, to be carefully renewed every time the flowers fade. My object now is to call the attention of gardeners to the possibility of hybridising this shrub with another, a description of which and coloured plate have appeared in the *Revue Horticole*. I refer to *B. Colvillei*, without doubt the handsomest species of the race; its large rose-coloured corolla has the happiest influence upon species hybridised by its means. The plant is now in my possession. I received some from Mr. Gumbleton, and have distributed them among a few friends. The plant which I gave to M. Micheli is now superb, but it has yet to flower. He will not fail after it has flowered to cross it with *B. variabilis*, which is so perpetual flowering. M. V. Lemoine likewise possesses, or should possess, a plant, and no



Part of a plant of *Acacia cordata*. From a photograph by Mr. G. Pim, Dublin.

doubt will strive to be the first in this hybridising race. I once saw in the Cordilleras of the Andes, on the high plateaux of Ecuador and Columbia, in soil said to be fairly cold, numerous fine species of *Buddleia* not as yet introduced into Europe. What handsome shrubs they would make in our gardens were it only on the Mediterranean coast! *Buddleia verbascifolia*, *B. hullata*, *B. calycina*, *B. Jamesoni* inhabit those regions, and then there are the *B. grandiflora* of Brazil and those of Chili and of Peru, the native land of *B. globosa*; those of Argentina, and even of Madagascar, which gave us the beautiful *B. madagascariensis*. Let us hope we shall one day see all these handsome shrubs in our collections.—ED. ANDRÉ, in *Revue Horticole*.

STOVE AND GREENHOUSE.

ACACIA CORDATA.

THE pretty little *Acacia* here depicted does not seem to be very much known, but is, I think, destined to become a favourite. It blooms profusely in a very small state, and can be readily kept in bounds by cutting back, although naturally the shoots are somewhat long. The flowers differ from those of most of its congeners in being nearly white, so pale is the yellow. The leaves are very curiously shaped, cordate, with sharp, almost prickly points, and closely set along the stems. G. PIM.

Cyrtanthi in flower.—Treated as greenhouse bulbs, many of the small-growing species of *Cyrtanthus* flower freely quite early in the year. Of these small kinds, especial mention must be made of *C. Mackeni*, white; *C. lutescens*, pale yellow; *C. angustifolius*, light red; and *C. Macowani*, crimson-scarlet. They all need the same treatment, that is, growing in deep, well-drained pans or pots, the soil consisting of a good sandy loam. They do not require any drying off, as many bulbs do, though, of course, during the winter less water is required than at any other time. They will stand for years without being repotted, and given much the same treatment as a *Pelargonium* will do well. Seeds ripen freely, and seedlings make such headway, that if grown on without a check, many of them will flower in about eighteen months.—H. P.

Ivy-leaved Pelargoniums for cutting.—I find some of the newer varieties of this section very useful for furnishing cut blooms. If they are grown along freely through the summer, getting them into 6-inch pots by the middle of August, they will furnish a lot of bloom in the following spring if wintered in a temperature of from 45° to 55° according to the weather. If shifted into 8-inch pots in May they will make large specimens, and it is surprising what a quantity of fine trusses can be taken from them if they are supplied with liquid manure once or twice a week from the time they become root-bound. The older kinds had foot-stalks too short to allow of their being serviceable for cutting, but varieties that have been raised within the last few years have foot-stalks long and stout enough for any purpose for which cut flowers are required. The double kinds are, of course, much the best.—J. C. B.

Clerodendron fallax.—Young plants of this *Clerodendron* grown on freely without stopping, and each carrying one large head of bloom, make a goodly show at any season of the year. It is a native of Java, and is consequently a stove plant, but at this time of the year it may be kept in a cooler structure. In the greenhouse the flowers last longer than under any other conditions. It is very easy of increase, as cuttings strike root readily, while seeds are often produced. They germinate quickly, and treated liberally make rapid progress afterwards. A nearly allied species whose ornamental qualities are about on a par with those of that just mentioned is *C. Kämpferi*, of which a coloured plate was given in THE GARDEN, December 24, 1892. This is quite an old plant in gardens, having been introduced about 100 years ago.—H. P.

Streptosolen Jamesoni.—This is a fine plant either for the conservatory or for summer bedding. To flower it well it requires to be grown

where it is well exposed to the sun, and it is not until the wood is well matured that it will bloom well. Old cut-back plants started early in the spring soon come into bloom, and continue well through the season. Some time ago I saw several good plants in bloom in the conservatory at Offington, and I find it has been flowering well in the Worthing Park. These plants are about 3 feet high, and when I saw them a few days ago they were full of flower and seemed likely to continue for the rest of the season. I understand they have been flowering for upwards of a month. This useful plant is easily propagated from cuttings, but these do not flower well the first year; at least that has been my experience. Given the same treatment as Bouvardias they grow freely, but give very little flower the first year, while the older cut-back plants bloom freely from every shoot.—H.

Hedychium coronarium.—This is now flowering in the stove at Mr. Goodliffe's nursery, Worthing. The plants are grown in 8-inch pots and have several strong growths in each, most of which are flowering this season. The terminal clusters of pure white flowers are very pretty, and emit a most pleasant perfume. The above and *H. Gardnerianum* are both well worth a place where room can be given. They succeed best perhaps when planted out, and to ensure flowering when grown in pots they must be divided from time to time before they get too much crowded, otherwise they do not make growths strong enough for flowering. They may be potted or planted in good rich loam with leaf mould and manure added, and during the time they are making their growth they should be liberally supplied with water. They may be kept cool and dry during the winter. When given a period of rest they flower better than when kept in heat throughout the year. The flowers, though not long-lived, are very beautiful.—SUSSEX.

Allamanda grandiflora.—The habit of this species is quite different from that of *A. Schottii* and similar kinds, and it is better fitted for growing into loose bushes than for climbing over roofs or trellises. The shoots are more twiggy and shorter, the flowers smaller and paler yellow, making a welcome change from the deep yellow large blossoms of *A. Schottii*. The plants do best in a good sound yellow loam with a little peat and half-decayed manure added and a liberal sprinkling of sharp silver sand, all made very firm at potting time. This ensures a hard, solid growth that is more easily matured by sun and air than when the soil is very loose and rich. All through the growing season—indeed all the year round—this *Allamanda* likes to be exposed to the full sun and will never be free-flowering if kept in a shaded stove. Heat it likes in abundance and a moist atmosphere, but it must not be shaded. When starting in the spring the shoots should be allowed to make a little growth before being repotted, or it may be difficult to induce free root action, and a slight bottom-heat is useful in the same direction. Cuttings of half-ripened wood root readily in a brisk bottom-heat.

Cassia corymbosa.—Many greenhouse shrubs are greatly benefited by being placed out of doors during the summer, and those that bloom at that period may be employed for various decorative purposes. The practice seems to be greatly on the increase, especially in some of the public gardens, of plunging large plants either on the turf or in beds, where in the summer they yield a display of blossom or of foliage totally distinct from any hardy subjects. The *Cassia* in question readily lends itself to this mode of treatment, as if kept during the winter in a greenhouse or conservatory just free from frost and treated much as *Fuchsias* are, it will grow and flower profusely when turned outside in the summer, more particularly during such a season as we are having. The prettily divided leaves, which are of a bright shining green, are very attractive, and serve as an admirable setting to the clusters of rich golden coloured blossoms. It is a native of Brazil, but has been grown in this country for over 100 years.

Many other subjects are available for the same mode of treatment, prominent among them being *Fuchsias*, *Pelargoniums*, *Heliotrope*, *Bougainvillea glabra*, *Browallia* (*Streptosolen*) *Jamesoni*, *Erythrina Crista-galli*, *Plumbago capensis*, and others, many of which are so employed in Hyde Park.—H. P.

BOUVARDIA HUMBOLDTI CORYMBI-FLORA.

This is in many particulars widely removed from the numerous garden forms of *Bouvardia* that are so largely grown in many places. The flowers, which are borne in loose corymbs on the ends of the shoots and principal side branches, are as much as 3 inches long and over an inch across, pure white, and deliciously scented. It also flowers much earlier than any of the others, numerous examples of it being now beautifully in bloom, their Jasmine-like perfume being much admired. Good plants may be grown in 5-inch pots, but they must not be stopped too much, the object being to obtain a few stout, sturdy shoots, each of which will carry a huge head of bloom rather than a great number of weaker branches. It is difficult to obtain good flowering examples of a less height than 18 inches to 2 feet. The exceedingly long tube is rather weak; hence when the plants are employed for decoration, care must be taken in moving them about, otherwise the tubes will break. This *Bouvardia* will flower well if planted out of doors during the summer, as if the plants are large enough they will commence to bloom soon after midsummer and continue till the frost. This, of course, does not apply to those planted out during the summer and lifted in the autumn to flower in pots. There is a comparatively new form of *B. Humboldtii* known as *grandiflora*, in which both the foliage and flowers are of greater substance and somewhat larger than in the variety *corymbiflora*. It is a really good plant, and attracted a considerable amount of attention last autumn when it was several times exhibited. It received an award of merit from the Royal Horticultural Society on November 9, 1897. H. P.

Rhododendron Falconeri.—This fine greenhouse species is not usually a success in gardens, as many persist in giving it too much heat during the growing season and after, this combined with a dry atmosphere predisposing the plant to insect attacks as well as causing it to grow out of season. Of course, in the small state that we are compelled to grow it to bring it within the limited capacity of our glasshouses it is not likely to be as free as the smaller growing kinds, but by judicious treatment it may be had in flower annually. Where possible it should be grown in a house that is never entirely closed excepting at night during very severe weather, but such structures are not always to be had. Rather than keep it cooped up in an ordinary greenhouse the year through it should be placed in the open air and well hardened after its growth is complete, and the most airy and cool quarters at command must be given in winter. This gives the buds time to form and develop properly, and even then it must not be hastened, but allowed to come on quite naturally and gradually, placing the plants in the open air again in April if no convenience exists for them under glass. Slight frosts do not harm the plants, especially in autumn; in spring the foliage may be damaged by cold winds.

Campanula Vidalii.—This *Campanula* forms a very attractive feature in the greenhouse, and is also particularly interesting as being very distinct from any other species. It is a native of the Azores, from whence it was introduced in 1851, and requires the protection of a greenhouse during the winter. It may, however, be planted out in the summer, under which treatment it will flower for a long time. In this way I have seen it very attractive in some of the London parks. A prominent feature of this *Campanula* is its half-shrubby character, as it forms a stout stem, which

divides, as a rule, into several branches a little way from the ground. The leaves, which are principally clustered towards the points of the shoots, are narrow, deep green, and fleshy in texture. Standing well above the foliage, the long spikes of drooping wax-like blossoms are seen to great advantage. They also remain fresh for a considerable time, while numerous buds develop from the same spike. It forms a few stout roots with little or no fibres; hence it is very impatient of removal, as if shaken clear of soil and repotted it will frequently stand a long time before it makes a start. A single plant will produce a large quantity of seed, and as it germinates freely, this is the best method of increasing this *Campanula*. Being of a somewhat succulent character, it must, especially when young, be kept moderately dry during the winter months. A good illustration showing this *Campanula* flowering in the open border with great freedom at Ardcarn, Co. Cork, appeared in vol. liv. of *THE GARDEN*, page 290.—T.

Propagating Pelargoniums.—The regal *Pelargoniums* ought not to be kept any longer under glass, as they are best for a week or two in the open before propagating, especially where they have been shaded while in flower. The plants in this case must not be turned out directly to the full sun, but hardened a little previously. I always stand mine under the shade of an old Mulberry tree in the garden, where the wood hardens before being placed in the full sun in front of a Peach house. The roots are dried a little by degrees, but the water supply is never totally withheld as long as the growth is upon them. The cuttings are taken the first week in August, and the old plants stood quite in the full sun and kept quite dry until new shoots appear. When these are an inch or so in length they are thinned to the requisite number and the plants repotted into very firm soil. All flower-stems should be rejected as cuttings, and only half-ripened, hard wood with good leaves used. Three cuttings may be placed in a 4 inch pot, first removing the sheaths at the leaf bases and cutting clean with a sharp knife just below a joint. Stand the cutting pots in the full sun out of doors, and at first keep them well soaked with water. As the roots appear gradually give them less, and it is easy to see when they are well rooted by the leaves picking up. Any shoots with young points may be pinched at this stage, but a good many of the cuttings will not need this, as they will branch naturally. It is not often they can again be placed outside after potting singly, but with the old plants should be given a place on a light stage in the greenhouse and kept gently moving through the winter.—H.

Hydrangea Hortensia in pots.—I was pleased to see the illustration of the fine specimen of this showy plant at p. 19 of *THE GARDEN* and to read Mr. Young's cultural notes. Many years ago I was employed in a garden where *Hydrangeas* were well grown in pots, very large bushes being required for standing in the front hall of the mansion. In three seasons from the cutting the plants attained to a large size and were objects of great beauty. The great point is, as Mr. Young says, to get the growths well matured by exposure to sun and air. When the plants have arrived at the desired size they may be kept in good health and vigour without repotting by annual mulching and liberal feeding with liquid manure. At this age it is not advisable to allow all the new growths to remain. Judicious thinning should be practised, this ensuring plump terminal buds and large trusses of bloom. A good holding yellow loam, a sixth part well rotted manure, and some coarse sand or road grit suit them well, ample drainage being indispensable, as established plants will take copious supplies of water during growth. The plants under notice had the protection of a cool pit or home-made unheated glass structure during winter, the pots being plunged in leaf-mould to protect from frost. It is best also to be cautious in exposing the new growths to the open air in spring, a very sheltered corner being best,

or damage may be apprehended. When flowering is past the old stems should be clean cut out in order to give the new shoots the best chance of development.—J. C.

NOTES AND QUESTIONS.—STOVE.

Alpinia mutica.—This may be treated in the same way as the Hedychium. As a fine-foliaged plant it is worthy of a place where room can be given. The tall succulent growths attain to from 5 feet to 6 feet high, and when surmounted with large panicles of bloom they are very attractive. In a batch of plants grown in the stove there have been some flowers throughout the spring.—A.

Ivy-leaved Pelargonium Mme. Crousse.—Despite the number of new kinds annually sent out, this old kind still maintains its hold. Window boxes filled with it and white Marguerites are still common, and it is largely grown for the purpose both by market men and private growers. Like Souvenir de Chas. Turner in its colour, it seems to be impossible to get a better flower with the same excellent habit of growth and free-flowering characteristics, and it will be long before either is ousted from its position.—H.

Costus igneus from seed.—This showy plant may easily be raised from seed. It should be gathered when nearly ripe and placed in a sunny, dry place to finish, eventually sowing at about a couple of inches apart in well-drained pans or pots of loose, rich soil. The seeds germinate quickly and surely. The seedlings should be lifted with a little soil attached to the roots, potting into 3-inch pots, and growing on as rapidly as possible in a warm greenhouse temperature. The pretty fresh leafage of seedling plants alone makes them worth growing, being much deeper in colour than old leaves.

THE MARKET GARDEN.

THE BANANA IN CULTIVATION AND COMMERCE.

THE Banana is, as is well known, one of the principal articles of food of the people that inhabit the intertropical zones. A pound weight of Bananas, according to Humboldt, contains as much nutritive matter as 44 lbs. of Potatoes. Crichton Campbell, "one of its greatest advocates in the United States, estimates the nutritive value of 1 lb. of Bananas to be equal to 25 lbs. of wheat bread. The Americans import immense quantities of Bananas at the present day. The number of clusters imported in 1896 through the ports of the Mexican Gulf, New Orleans, Mobile, New York, Charleston, &c., was not less than 25 millions, which were immediately absorbed by the markets. Each cluster brought from Central America bears 120 to 180 fingers, and weighs from 2 qrs. 5-8 lbs. to 3 qrs. 4-3 lbs., so that it is easy to comprehend what an extraordinary development must have taken place in the cultivation of the Banana in order to supply a consumption of such magnitude. For the present I will consider the regions of the east and centre of the United States only, California and the other Pacific States obtaining their supplies from the southern coast of Mexico and the Hawaiian Isles.

In all the favourable parts of the north coast of Central America, from the colony of Belize in 19° of lat. N. down to Santa Marta, in Colombia, immense breadths of Bananas have sprung up. Jamaica, San Domingo, Cuba and the Bahamas also produce great quantities, but of inferior quality. Large centres have been formed, towns even have arisen in tropical centres such as La Ceiba, Rama, and Bocas del Toro. The last, which I knew in 1883 only as a miserable, straggling, isolated village

at the entrance of Admiralty Bay, in Northern Chiriqui, is to-day an important town, in direct communication twice a month with New Orleans. In 1883 the district counted barely 500 inhabitants; to-day it has close upon 10,000. The department of Zelaya, in Nicaragua, the ancient realm of mosquitoes, and not long ago quite overlooked by geographers, has now its Banana plantations, with a service of steamers putting Rama and Bluefields in constant communication with New Orleans. And what of Port Sanion and Costa Rica? On both sides of the railway which unites the port with the capital, along the latter end of the route, is a forest of Banana plants, and to meet the steamer at the port there is an endless succession of trains, discharging hundreds and thousands of tons of the fruit for conveyance to New Orleans. More south still, Colon, Carthagena, and Santa Marta furnish also a considerable contingent; but as at these ports the traffic is chiefly with New York, there is a considerable slackening off during the winter months, owing to the frosts that are met in transit beyond Cape Hatteras, which sometimes destroy whole cargoes of fruit. North there is Honduras, Guatemala, and the English colony of Belize served by a weekly line of steamers plying between Belize, Livingston, Puerto Barrios, Puerto Cortez, and New Orleans. On each voyage there is a complete cargo of Bananas. Another line communicates twice a month with the ports of Ceiba, Truxillo, and Roatan, and once a month another line places these ports in touch with New York. Another port of call for fruit vessels arriving is that of Galveston, Texas, which will eventually become a very important place owing to its direct communication with the interior of the United States in the south-west, it being the terminus at the Gulf of Mexico for the South Pacific Company's railway.

VARIETIES.

The Banana belongs to the family of Musa, of which the species are very numerous. That cultivated in the regions under discussion is *M. Paradisiaca*; this includes many varieties which have not, so far as we know, yet been scientifically classed, even Horaninow in his "Prodromus Scitaminearum" (Petersburg, 1862) having renounced the task. The only variety which is now cultivated to a large extent, however, and the only one admitted without dispute in the American markets, is the variety *M. sapientum*, called Taita, or Tahitian. This is said to have been introduced to the southern coast of Mexico, at San Blas and Acapulco, by the galleons from Manila, and to have been increased there first until it was transported to the north-west, where to-day it reigns supreme. It has the advantage of being more robust than the other varieties, of being easily increased by suckers, of the fruit clusters being compact, regular, and almost always equal in weight, thereby bearing carriage for long distances better than any of the others, and lastly, of the fruit being well formed, fat and succulent, and as fit for cooking as for eating raw. As in all the numberless plantations of the regions under discussion it is the only one grown for exportation, and we shall therefore consider only this variety. In the markets of New Orleans, Mobile, and generally in the Mexican Gulf there is a large species of Banana often met with called *Plut-au-ciel*, or *Dieu le veuille*, cultivated especially at San Domingo, which is only fit to be eaten cooked, and is rather insipid. The clusters contain only a few fingers, from ten to twenty-five, but each of the fruits weighs as much as 2 kilogrammes. At New York there is also

introduced, but in very small quantities, the Banana Fig (*M. mensuaria*, or *Neina*), a delicious fruit well known in the Antilles and in Central America, but the clusters are very small and barely exceed 2 kilogrammes; it is a fruit *de luxe*. Here it would be superfluous to describe the Banana from the botanic point of view. The elegance of its form, the beauty of its port, the size and the emerald of its leaves grouped around the graceful and supple stem, and moved by every motion of the breeze cause it to be used as an ornamental plant in our country. Rarely, however, do we see the Banana in bloom, its flower emerging first as a vigorous scarlet-rose bud from amongst the smaller leaf and more delicate green of the terminal shoot, next bursting into bloom, and displaying the concentric rows of little yellow-white flowers surrounding its floral axis, and shortly to be transformed into Banana fruit. In this particular variety it is rare that the sterile flowers, which first appear on the style or floral axis, are numerous, and hence those fine, compact clusters so much prized in the United States. The flowers are quickly over and the fruit appears, tiny at first, as it emerges from the ovulus, but it increases in length and grows in girth almost under the eye. Its weight causes the cluster to droop more and more from the soft bower of leaf that shelters it from the heat of the sun. The fruit thickens and the skin is now firm and light, and though not yet quite ripe, it is the time to cut away the cluster and despatch it to the port. Cut at the right time the Banana ripens easily in eleven or fifteen days. If, however, it is to be eaten on the place, it is left for some days more until the fruit has taken on the golden colour which is proper to the Taita Banana. The cluster having been cut away, it is the custom in all rightly managed plantations to cut down the plant which produced it to make way for another which in a few months will also produce its cluster of fruit. On the northern coast of Central America one Banana plant produces every year two, three, and even four or five different fruit-bearing shoots. This particular Banana varies in height according as the soil is more or less favourable to it.

USES OF THE BANANA.

The Banana is used in different ways, raw or cooked. Raw, it is a savoury, floury, slightly saccharine, agreeable, rather astringent fruit, not easily digested by some stomachs unused to it, especially children, in whom it is apt to cause gastric troubles if not quite ripe or over-ripe. It is more commonly eaten raw in the United States. Cooked, it is prepared in a number of ways. In the tropics they cut it before maturity and remove the skin, which in this state is very acrid, and cook in the oven or under the ashes. Prepared thus it serves for bread. Also, after desiccation it is made into a flour by pounding in a mortar and kept in sacks or jars in a dry place: in this state it keeps for a long time. This flour, which is very nourishing, is carried by travellers, who make from it a very healthy and refreshing drink and a sort of thick gruel, which is sometimes eaten with sugar to deprive it of a certain insipidity. Cut into slices it is used in soups, and is one of the resources of the *ménage*, just as the Potato is with us. The ripe fruit baked in the oven is a very healthy and nourishing and at the same time very agreeable food. It is also made into fritters, cakes, bon-bons, &c. Its price in New York (one cent) places it within the means of all. Out of ripe Bananas fermented *au eau de vie* is distilled, but the amount of essential oil it contains imparts to it a disagreeable flavour, and being comparatively wanting in strength it

is rather despised by toppers and only used failing other and stronger liquors. Its

CULTIVATION

on a large scale as practised on the north coast of Central America is the simplest and most rudimentary. The only obstacle to the European who should risk to embark in it is the climate. The Banana, in fact, requires for its development and easy production a climate at once warm and moist. The lowest temperature it will stand is 22° Cent. In looking for the soils that are proper to it, the choice must be made in the littoral zone, where life for the European is certainly passed under unhealthy conditions; but, given certain precautions easy to be observed, it may be affirmed that the fears which are generally expressed in regard to this are, as a rule, greatly exaggerated. The choice of soil is of great importance; it should neither be too dry nor too moist. A black loam or a red ferruginous soil is preferable, and a site raised rather above a river so as to be out of reach of the inundations that occur periodically. The best choice would be that of a site stretching for some distance along the banks of a river and where there is no great depth of soil. It would then be easy and not costly to convey the clusters to the riverside for putting on board boats and barges for conveyance to the port of despatch. The chosen site should be protected from the north winds, which often blow in tempests on this coast from November to January. It is the custom in clearing land for plantations to leave on the northern side a belt of forest to give the necessary protection. The effect of violent winds is to deprive the fruit-cluster of the adequate protection of the young leaves at the commencement of its growth and expose it to the fierce rays of the sun, under which it withers and becomes useless. After the choice of a site the next thing is to clear the ground, which in certain spots is no easy matter, owing to the forest being choked with the free growth of creepers, dwarf prickly Palms, and all the exuberance of tropical undergrowth, which, in the neighbourhood of rivers especially, often makes it a very laborious task. The axe and the knife are used to hew down all but the forest trees of mature growth, which it would be too costly to attack directly, and which are presently to be reduced to ashes by means of fire. The work of making clearings is undertaken at the beginning of the dry season—that is, November or December—after which the felled trees being sufficiently dry, the opportunity is taken of a rather strong wind in the quarter most favourable for leaving intact the belt of forest left for the protection of the plantation from northerly winds to throw petroleum over the first of the felled trees and set it alight. The fire rages with the utmost violence and swallows up everything in a very short time, leaving nothing whatever of the great forest trees but the half-calced stems, in which the fire continues to smoulder for several days. The work of clearing is generally done by contract with the natives of the country, who are used to it, and whose services are always at hand. The cost of clearing a single hectare of land is about 80 pesos, or a little less than 200 francs. The cost of the purchase or occupation of lands, whether government or private property, is so trifling as to be not worth mentioning here. The site having been cleared, the first light rains are waited for, when the planting of young plants can be carried out. Young plants of the species or variety preferred can easily be had in the district, and ought not to cost more than 5 pesos the hundred. The ground having been pre-

pared for them, the plants are set out, the space between each varying according to the locality and temperature. I think a space of about 10 feet between each is the best, yet I have seen plantations in which it did not exceed 7 feet and even 5 feet. In this case, however, after the first year or two there is the certain fear of overcrowding, which can only be avoided by sacrificing a number of the plants each year. That being so, I adhere to my opinion that a space of 10 feet is preferable, and this avoids overcrowding, and at the same time the plants are close enough to each other to prevent the sun drying up the adjacent soil.

A plantation of one hectare under such conditions should contain 999 plants, but as in all these lands, even the best cleared, there remains a certain number of burnt stumps of old trees, I am inclined to put the real number of plants to the hectare as 800 only. The young plant is set in a hole prepared in advance, about 20 inches deep; the hole is then covered up, and care taken to collect a sufficient depth of soil about the young plant to prevent as much as possible the action of the sun on the roots. The plantation having been made, it is necessary at the outset to keep down the growth of weeds and underwood which would otherwise choke off the young plants. This work is not of long duration, as the Banana grows very quickly and itself overwhelms everything that grows underneath it.

FRUITING PERIOD.

Generally eight months elapse before the Banana furnishes its first cluster of fruit; this is generally of small dimensions, as not before the second year does the plant begin the regular production of clusters large enough for the American markets. From this stage onwards the plantation may be left to look after itself, except that care must be taken to cut the fruit at the right moment. When cut the fruit is taken down to the riverside, put aboard the boats and carried off to the port of despatch. The fruit is generally sold at the port of despatch, sometimes on the steamers themselves, sometimes to agents, according to quality and weight at the rate of 30, 60, and even 80 centimes the cluster, those of Bocas del Toro fetching the highest price. The labour needed for

WORKING A PLANTATION

of one hectare in extent in the producing stage is a very small item, and I advise anyone who thinks of taking up the business not to plant less than 10 hectares. In the latter case two gangs of ten men each are sufficient at the most, each gang being under a supervisor. The price of labour is generally 1 peso for a workman and 2 pesos or 2 pesos 50 for the supervisor. Labour is relatively very easy to get for this kind of work. On the other hand, the cost of transport by boat or canoe from the plantation to the port is rather high, whether the plantation possesses its own means of transport—which is the most practical way, but involves at the outset a considerable outlay—or whether the work is done by contract, which is quite possible. On all accounts, therefore, it is preferable to set up the plantation near to a port. On the Mosquito or Nicaragua side, on the river Rama, the steamers run as far as the plantations, the river being navigable for a long distance. At Port Barrios, Port Cortez, Port Sinion, Colon and Santa Marta the trains fetch the Bananas down to the wharves, nearly all the plantations being situated in these regions alongside the railway. In this case great economy is secured in transport. In any case and whatever the cost of transport, I consider the

cultivation of the Banana as one fraught with the greatest profit to whoever devotes himself to it. It is necessary that someone should devote himself, like Crichton Campbell and others in the United States, to the diffusion of the Banana as an article of food. What is wanted in our markets is a Banana at once cheap and of good quality. The Banana as we know it in the Paris markets, for example, is small, flavourless and very dear in price. It occurs to me that in our colony of Senegal, and especially Rivières du Sud, where the climate is analogous to that of the northern coast of Central America, the Banana known as Taita could be grown with excellent results; and as its fruit is capable of standing a considerable length of sea voyage, it would be easy to bring it to our ports at a reasonable cost.—A. L. PINART, in *Bulletin de la Société d'Acclimatation*.

GARDEN FLORA.

PLATE 1236.

LÆLIO-CATTLEYA DOMINIANA LANGLEYENSIS.

(WITH A COLOURED PLATE.*)

IN THE GARDEN, vol. liv., p. 465, will be found a figure of *Lælio-Cattleya Dominiana langleyensis*. Accompanying it will also be found particulars of the origin of L.-C. Dominiana and its varieties, including particulars of the accompanying coloured plate. It was raised by Mr. Seden in the nurseries of Messrs. J. Veitch and Sons, Ltd., at Langley, and was exhibited at the Drill Hall meeting of the Royal Horticultural Society on October 11, 1898, when it was awarded a first-class certificate. One of the most interesting points in connection with this beautiful hybrid was the fact of clearing up the uncertainty which had previously existed with regard to its parentage, proving it to be the result of intercrossing *Lælia purpurata* and *Cattleya Dowiana*. As stated in the notes referred to above, there had been four varieties previously raised of this hybrid. L.-C. D. rosea was certificated in 1884. Mr. Law-Schofield exhibited the variety L.-C. D. tyntesfieldiensis at the Temple show of 1897, and Mr. J. Douglas exhibited a form as L.-C. Appollonia in 1896. This variety was very much inferior in colour and distinct in many ways from the other forms of L.-C. Dominiana. I have not the slightest doubt that this distinction has been brought about by using C. Dowiana var. aurea instead of the old C. Dowiana from Costa Rica. Though much sought after, C. D. aurea has not the substance or the intense colouring that are found in the older species, though it will be found to possess a better constitution, and may be kept in perfection for an indefinite period, a desirable feature which cannot generally be claimed for the old variety. Since the article referred to above appeared some other additions have been made by plants flowering in collections in this country that have been raised on the Continent. One received a first-class certificate at the Drill Hall meeting of June 27 last as L.-C. Dominiana var. Fire King, coming from the collection of Mrs. Briggs-Bury, Bank House, Accrington. A full description will be found in THE GARDEN of July 1 containing the report of that meeting. Mr. J. Seden agreed to its being a form of L.-C. Dominiana in a conversation I had with

* Drawn for THE GARDEN by H. G. Moon in Messrs. Veitch and Sons' nursery at Chelsea. Lithographed and printed by J. L. Goffart.



NAPELIA DOMINICA LANT. 1850-1851

him afterwards. On the following Thursday (June 29) another form of this hybrid, from the same continental origin, was exhibited at the Manchester and North of England Orchid Society's meeting by Mr. G. W. Law-Schofield, and was awarded a first-class certificate as L.-C. Fire King var. Frances Mary. Surely such a name as L.-C. Dominiana Fire King var. Frances Mary is unnecessary. If the one had previously been recognised as a form of L.-C. Dominiana, the other must be a form also of that hybrid. The complications are already sufficient in the nomenclature of hybrid Orchids. Such a system as herein illustrated can easily be avoided, and in this instance might have been. The fact of its being recognised as Fire King leaves no excuse for dropping the name of L.-C. Dominiana. That Mr. Law-Schofield's plant was a distinct form I am ready to admit, for I saw this in good condition. Its principal distinction was in the base of the lip and through the throat. Instead of the usual yellow and purple longitudinal lines, the whole of

as to be an ungraceful mass, which of course detracts from their elegant form. The exhibit in question required but one thing, namely, a bud peeping out here and there, which would have added to its natural appearance.—H. S.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

ORCHARD HOUSE.—In the orchard house there will now be need of constant attention with the watering pot, for the limited size of the receptacles, combined with the crammed state of the roots, makes frequent watering, with some things as often as three times a day, quite necessary, and stimulants in the form of liquid manure should be given almost at each watering to those trees still carrying fruits, and once a day to such as have been cleared of their crop, for these will still require help to plump up next year's fruit buds. As fast as the orchard-house trees are cleared of fruit they should be removed to the open, or, in the case of trees that have been plumped and have

quantity of fruit if allowed access to it, and a stray blackbird getting into the house is also capable of doing much mischief to fruit, which from the limited capacity of the system of production costs a great deal to produce. Apples and Pears certainly finish up best if they can be removed to the open to ripen after they have reached full size, as they derive benefit from the night dews. Of course such removal is only advised where the trees have not been allowed to root into the inside borders, for cutting off the supply of nourishment by disturbing these roots would more than counteract the benefits above spoken of. Trees put outside in this way will have to be protected from birds and wasps. It is late now to speak of top-dressing, but there is still time to renew it in the case of the latest crop, and it is astonishing how soon the roots and the fruits respond to a little generous treatment in this way, and I do not hesitate to recommend a further dressing of malt dust to any pot tree which appears backward in swelling its fruits.

VINERIES.—Early Vines, from the great differences in outside and inside temperature during the time they are making their growth, are more subject to mildew than are the later ones, and wherever there has been the least sign of this pest during the season, I strongly advise now that the fruit is off, two or three good syringings at intervals of a week of water in which half an ounce of soft soap has been dissolved and two ounces of flowers of sulphur mixed to the gallon of water. This will be useful as an insecticide and will kill the germs of mildew that may be left behind.

MUSCATS.—Muscat of Alexandria Grapes which are not well coloured by the end of August stand a very poor chance of taking on the clear amber hue so much appreciated by lovers of this Grape: consequently the treatment afforded from this time onward must tend to putting on this colour. Where the bunches run small there is very little difficulty in getting them to colour up well, but it is the finest bunches that give the most trouble, and if these are now at all on the green side it is advisable to increase the fire-heat given by night and to remove any shading that may have been given in those few places in which it is found necessary to shade at all. The

Vines themselves will be none the worse for this additional fire-heat provided the necessary precautions have been taken to keep down red spider. The above conditions will be an advantage also to that excellent Grape Mrs. Pince's Black Muscat, one of the finest Grapes we have when it is well finished. Among other Grapes which derive much benefit from fire-heat is Gros Celman, as under the influence of artificial heat in which to finish it loses much of the flatness and muddiness of flavour which have brought it into disrepute among real lovers of Grapes. It will be necessary to look frequently over all bunches that have passed the colouring stage for damaged berries, as these should be removed before they carry decay to their neighbours. This is especially necessary with those varieties which are prone to berry-splitting, and in the case of Madresfield Court only a couple of days or so should be allowed to elapse between each visit, for if this is not attended to the evils of splitting will be more than doubled. In extreme cases where the splitting is very bad it may be necessary to cut partly through the laterals



Labio-Cattleya Dominiana langleyensis.

the basal portion had a suffusion of a peculiar shade of brownish purple. The remaining segments also appeared to be deeper in colour than in Mrs. Briggs-Bury's plant.

Since writing the above, I hear from Mr. Law-Schofield that the raiser asserts that the above-mentioned hybrids are derived from the intercrossing of *L. purpurata* and *C. Mossiae*. This would bring them to forms of *L.-C. Canhamiana*, which they certainly are not.

C. J. H.

Exhibiting Sweet Peas.—At the Birmingham Carnation show recently I noted a particularly fine exhibit of these flowers from Mr. J. B. Johnstone, Tettenhall. Not only were the individual flowers remarkable for their richness of colour and fine development, but they afforded a good lesson in arrangement. The blooms were cut with long stems and loosely tied at bottom in bunches, so that the whole had a very light appearance. Mostly one sees them tied so close

rooted through, prepared for removal by severing the main roots which have escaped their bounds. This may be done by running a spade round the pots or by twisting the pots around and dislodging the roots, which may be cut back afterwards. On removing the trees to the open, they should not be neglected either for watering or syringing, the latter being very helpful in retaining the leaves in good condition as long as possible. A good position should be found for the trees in the open—that is to say, they should not be crammed together in any out-of-the-way corner. Give them plenty of room and a good exposure to the light, but provide some means of shading the pots either by plunging them or by surrounding them with litter. In the house, to do the best by late Peaches, Pears, Apples, Plums, &c., ample ventilation must be given day and night, and where birds, rats or mice are plentiful, this necessitates covering the front ventilating spaces at least with galvanised netting of sufficiently small mesh to exclude these vermin, though the mice are able to get through very small openings. Rats are most troublesome with Plums, and will soon spoil a

to lessen the flow of sap, but the care in ventilating and other details which I advised in a former calendar note when dealing with such Grapes as these will probably have obviated the necessity of going to this extreme.

POT VINES.—Pot Vines for next year's fruiting will now have finished their growth and will have become firm in the wood. Some growers who have plenty of glass at command can afford to allow these Vines to continue in the pits where they have been grown, and expose them by simply leaving the lights off night and day whenever the weather is fine, but practically the same results will be obtained by moving them now to a south wall and providing a few pieces of slate or board laid sloping on the pots to carry off any excessive rainfall. From this time onward the water-pot must be less freely used, but it is a great mistake to withhold water altogether. Lessen the supply and give up the use of liquid manure, then well-ripened canes will be sure to result. Early ripening not being so necessary for younger stock, which will be cut back to the pots later on, these should still be kept growing and well fed for some time to come.

FIGS.—Keep the points of shoots on those trees trained near the roof well tied down to the wires, as the points extend much better when prevented from turning up to the glass. With the Fig it is possible to get the growths too short-jointed, and this will certainly follow if the shoots are not kept a moderate distance from the glass. Feed up those trees which are carrying fruit and ply the syringe freely on those which are without ripe fruit for the time being. The crop may be hastened at any time by closing the house early in the afternoon, but this should not be done when there is ripe fruit on the trees, more especially if this has to be packed for travelling, as only Figs which have been grown in a house well ventilated night and day are fit for such a purpose.

CORNUBIAN.

KITCHEN GARDEN.

WINTER CUCUMBERS.—It is now time seed of hardy reliable cropping sorts of Cucumbers was sown for yielding fruit during November and December. Some gardeners sow a little later and are satisfied so long as the plants arrive at a fruiting stage by the beginning of the first-named month, but I think, however, timely sowing is preferable, as although by reason of fine sunny weather the plants commence bearing before the fruits are really needed, the latter can be removed, and thus the plants are able to stand against the trying ordeal of cropping through the short, dull days. Syon House or a good strain of the old Telegraph cannot, I think, be surpassed for winter work, and the seeds should be sown in small pots, the plants being potted on in due course. Give them a light, airy position close to the roof-glass, yet out of draught, and by no means raise the seedlings in a house infested with either spider or mealy bug. Once allow this pest to get on the leaves of young Cucumber plants, they might as well be thrown away. If the house in which the plants are to fruit has had Melons or Cucumbers growing in it, a thorough cleansing must be given, well washing all woodwork with soapy water and coating the walls with limewash into which a little sulphur has been stirred. Plants now cropping and which are to keep up a supply of fruit till the winter batch comes into bearing must be well attended to, and as the summer declines and demand for salad lessens, these plants should only be allowed to carry a moderate quantity of fruit and receive a good, rich top-dressing of loam, bone-meal and road grit, followed by liberal supplies of liquid manure the colour of pale ale. Seed for supplying plants intended for fruiting at the new year may be sown from the middle to the end of September. A very light position while in a young state must be accorded them.

EARLIEST MUSHROOMS.—The season has now arrived for all those who require Mushrooms at the end of October and early in November to

collect manure for making the first bed. It is not advisable to use manure from grass-fed horses, such not being comparable to that obtained from corn-fed animals. Do not throw the manure into a heap as collected; rather spread it out thinly in an open shed where it can be moved about now and then to keep it sweet. When thrown together carelessly or from lack of convenience, it frequently heats unduly before being noticed. A large bed is not imperative for a start; therefore where material is scarce, a full-sized bed may be reduced to one half its dimensions by placing a board across the middle. As soon as sufficient manure has been collected let it be thrown into a heap and allowed to remain so for a few days, after which turn it over every morning, allowing the outside portions to come into the middle of the heap. When the bulk of the steam is dispelled, mound it up once more and allow it to remain untouched for a few days, then wheel it in to form the bed. Deep beds are not so necessary early in the season, shallow ones retaining sufficient heat and ammonia to induce the spawn to run, and when once young Mushrooms appear a gentle warmth should be allowed in the hot-water pipes. When making up beds lay on only a thin layer at a time so as to secure thorough firmness. Where sufficient head room exists I prefer treading the bed first of all, finally beating it very firmly with the back of a five-tined fork. Making completed, those who do not possess a bottom-heat thermometer may thrust in a stout testing stick. Examine this occasionally, and when the temperature has risen to its maximum, prepare a quantity of fine soil for surfacing. When the heat has declined to 90°, spawning may safely be performed, there being no fear of any reaction in these shallow beds. When spawned at this figure and covered down the heat is retained; whereas, when left to fall to say 80°, it will frequently run down to 60° and a considerable time elapse before young Mushrooms appear. After soiling, firm with the back of a spade, using a little chilled water if at all dry. Cover with a moderate thickness of oat-straw if obtainable, this being preferable to hay refuse, which so often becomes mouldy and offensive, making the surface actually colder than if it were not covered at all. As no fire-heat will be necessary for a time, so neither will be floor and wall moistening, these being commenced as soon as the pipes are warmed and a less moist atmosphere prevails. For inserting the spawn I prefer a flat-ended dibber, as a sharp-pointed one is apt to leave a cavity under the spawn. Some use no tool, merely making a hole with the hand about 1½ inches deep and pushing in the spawn, which should be in pieces about the size of a pigeon's egg. Re-beating the surface is necessary when spawning is completed. Some growers place the spawn in a moist plant stove for a few days previous to use, thinking that it then breaks up more readily. I have known a few good early Mushrooms secured by levelling and moistening the surface of old exhausted beds in Cucumber and Melon houses, inserting the spawn, and covering with crossbars and mats or even loose litter, but this can of course only be done when the house is not required for young plants in winter. Amateurs who have only a Cucumber or Melon frame may, after the crop is over, moisten the interior, insert spawn, and duly darken, keeping up the heat when colder nights appear by building up linings of fermenting material round the frames.

J. C.

Cactus Dahlia Lucius.—The first flower of this sort is open, and it quite comes up to the high expectations formed of it when seen last year at the exhibitions. It is an advance in form, being of light spiky arrangement. The colour is orange-yellow, rich and taking. In growth it is excellent, throwing the flowers well out of the foliage. The variety is one which should be noted as an improvement and one which is certain to become popular when less scarce.—S.

FRUIT AND VEGETABLE CROPS.

SOUTHERN.

Royal Gardens, Windsor.—Apples a good average crop, some trees heavy, others scarcely any. Same applies to Pears; many fell off, especially on walls, during drought and great heat from May 24 to June 18. Cherries a very heavy crop, clean, and of fine quality. I commenced picking outside on June 10. Peaches and Nectarines heavy crops. These are thinned and crop left according to age, vigour of tree, and variety. I ought to state that our Peach walls are covered with canvas blinds on rollers; this protection from spring frosts and wet invariably ensures a good set of fruit. Apricots rather thin; they were in full flower early in March, and 10° of frost on March 5 and 6 thinned them considerably. Plums about half a crop. Raspberries a heavy crop, and finest fruit I have seen, Hornet and Superlative especially. The Raspberry is much appreciated here as a dessert fruit, and with cream is by many preferred to Strawberries. Strawberries generally a poor crop. This, I conclude, is owing to the dry season last year, the foliage almost burnt up and crowns failing to mature. One variety that can always be relied on for cropping well here is Aromatic; the flavour is good, but the colour might be better. The Countess, Waterloo, and V. Héricart de Thury are also good this year. Many of the new varieties are very poor, though Royal Sovereign and Noble were valuable as early crops, and being a dry time (middle of June) the flavour was delicious and colour very bright. Bush fruits are abundant; Walnuts cropping heavily; Filberts under average.

So far vegetables have done well, though late, as the nights were very cold till nearly midsummer. Peas (early) were good, Gradus or Early Giant, Chelsea Gem, and Telegraph the best; main crops of Peas and late varieties want more rain. Cauliflowers very fine from autumn-sown plants wintered in cold pits in single pots. Onions are looking well; so are vegetables generally since heavy rain on June 30. Potatoes looking well. Ne Plus Ultra is a good early outdoor variety. Windsor Castle (now being lifted in fine condition) and late sorts are very promising.

—OWEN THOMAS.

Buxted Park, Uckfield.—This has been the most unfavourable season that I can remember for the production of first-class fruit and vegetables. The winter was a mild one, the average maximum temperature for January being 50° in the shade. This, together with the heavy rainfall, which was about 3½ inches, caused things to commence growth. All, however, went fairly well till the third week in March, when winter set in with a vengeance, and from March 18 to 25 the weather was more like what is usually experienced in January, for on one occasion we registered as many as 24° of frost. This put an end to all fruit blossom that was at all forward. Peaches, Nectarines, and Apricots suffered seriously, the former being less than a tenth of a crop, while there is none of the latter. Pears also suffered badly, and with the exception of two or three varieties I have no fruit. Plums, except those on a north wall, are a failure, for where I could gather a bushel last season I cannot find a fruit this. Strawberries are a very poor crop; in fact, the worst I have known for the last twenty years. Raspberries, on the other hand, are abundant, particularly Superlative, the fruit being both plentiful and good. Black Currants are a fair crop, but Red are very scarce, and the same may be said of Gooseberries. Cherries, both on standards and north walls, are good, but those on other aspects are very scarce indeed. Apples are partial, some varieties having an abundant crop, others none at all. This remark applies alike to standards and bush trees.

Vegetables of all kinds have done fairly well, with the exception of early Peas, which with me were quite a failure, having been cut down by the frosts in March. It is too early to say anything

about Potatoes, except the early kinds. These suffered so seriously from the frosts in May that they scarcely paid for lifting. The late ones, so far, are looking well. All other crops, considering the dry weather, are looking well and promise abundant returns. The weather has been very hot and dry of late, very little rain having fallen in this neighbourhood since April, so that the soil has become parched, and unless rain comes soon, all late crops will suffer.—H. C. PRINSEP.

Syon House, Brentford.—I fear the report of the fruit crops in this part of the country will not be a cheering one. Apples are a variable crop as far as I can ascertain. In some places there is an abundance of Codrus and early kinds; in others the crop is very poor. I have not a heavy crop of any one kind. My best trees are the late-flowering varieties. These escaped the severe weather the others experienced early in May. Such kinds as Prince Albert, Alfriston, Newton Wonder, Sandringham and a few others have average crops. Of dessert kinds there are none too many. I notice the newer Allington and James Grieve have full crops. The Pear crop is far more unsatisfactory, and this I much regret, as this is such a useful fruit. I have a few Beurré Diel, Marie Louise, Conference, Louise Bonne of Jersey and others, but so few with so many trees that the results are most disheartening. I never remember a better promise of fruit. The previous season having been a bad one, I expected different results in every way. Even on walls the same loss is felt. Cordon trees on all aspects are failures in spite of protection. This season my best crops are on a north wall, so that doubtless late blooming of the trees saved the crop. Plums are a total failure. I do not think I have half a bushel of fruit in the whole garden. I admit this is not a Plum soil, but rarely has such a total failure been recorded. The trees were white with bloom; this dropped in shoals after the fruit should have begun to swell. I am unable to name a single variety with a quarter of a crop. Damsons are very scarce; all the trees are alike. Apricots with me are a poor crop; the trees promised well, but 17° of frost when in bloom was too much for them. This with hail and sleet combined destroyed all the first bloom. A few of the late buds that were close to the wall escaped. Peaches and Nectarines usually set so well with me on open walls that the difficulty is mostly in thinning sufficiently to give the fruits a chance. But that is not the difficulty this season; indeed some of the earliest trees have not a single fruit; others, such as Dymond, the Nectarine Peach, Sea Eagle, Golden Eagle, and late kinds, are fair. Midseason kinds have a very thin crop. Nectarines are under the average. The trees of both Peaches and Nectarines look remarkably well and should make good fruiting wood for another season. Early Rivers Nectarine promises well, but this year such kinds as Pine-apple and late kinds have better crops than that useful variety Lord Napier. Cherries have been good. Doubtless owing to the protracted drought last season the trees have this year suffered more from loss of branches than usual, but in my light soil I always lose some in spite of frequent renewal of trees and assisting the roots. Most of the dessert Cherries were very good, and such kinds as Governor Wood, the Bigarreus in variety, Early Rivers and Black Tartarian were the best in the black section. Morellos this year are not so good. They showed plenty of bloom, but being late the severe weather affected them. As regards Strawberries, this is my worst year on record. Bloom was abundant, the promise good, but not a quarter of a crop, as frost at the blooming period killed the earliest and, of course, the strongest flowers, and severe drought with a light soil prevented later bloom giving the results it would have done, and I fear the crop in this neighbourhood may be classed as a quarter of the usual yield. In my own case I have been able on a single occasion to gather by the hundredweight; this year only by the pound. Raspberries are good, but need moisture badly to swell up the fruit. Superlative

I find far ahead of all others for crop. Gooseberries and Currants have been good, the latter being more abundant than the former. The Gooseberries though late were doubtless affected by the late frost.

Vegetables have been plentiful. Potatoes were much later than usual, owing to the cold weather. At the end of May growth was at a standstill, and it is surprising how cold affects some, such as the Ashleafs, more than the stronger growers. My earliest kind this year was Ringleader, but the best, though a few days later, was Ninetyfold. Most of the Ashleaf varieties are splendid this year as regards quality, but the tubers are rather smaller than usual. The late kinds look well and promise a large yield, and there is so far no sign of disease. Broccoli this spring, owing to a mild winter, was over sooner than usual. Cauliflowers were excellent, and though the heat and drought have affected later supplies, by having plants in diverse positions there has been no break in the supply. The early Pea crop was the best I have had, and in spite of cold weather when in bloom I gathered Chelsea Gem in May from open borders. Bountiful I find a splendid variety for sowing in pots and planting out. The plants of later kinds have been attacked badly with thrips, but so far I have kept pace with the pest and only a small portion of the plants suffered. Later crops will need the same care, and should be watered overhead in the evening to check the spread of insect pests. There was a bountiful supply of French Beans from pot plants, and those sown in the open are doing well, but need moisture to keep red spider at bay. I find the new climbing Beans of great value, as they are more robust than the dwarf kinds and not so quickly affected by drought and heat and nearly as early with fine pods. I consider this new Bean of great value where quantities are needed. Other vegetables have been plentiful and good; salads abundant till mid-July. Since then special culture has been necessary to provide successional supplies. Most crops in this district at the time of writing need rain badly, and I fear in many gardens it will be a difficult matter to get out the winter crops. Every chance should be taken to do so, as when change of weather occurs the plants will soon make up for lost time.—G. WYTHES.

Swanmore Park, Hants.—The fruit crops here and in this neighbourhood generally are unsatisfactory. Apples are a very thin crop, and this notwithstanding the abundance of bloom. The late frosts experienced at the time they were in flower proved very destructive. Then, again, later on (June 28) a severe hailstorm visited the district, doing much damage, knocking some of the fruit off and bruising the remainder that were not protected by branches. Pears are likewise a thin crop. Plums are also a scanty crop. One of the largest growers in this district estimates his crop at about a quarter of the average. Here we have a poor crop with the exception of the variety Belle de Louvain, which is heavy. This appears to be a most consistent bearer. It is early, the quality good, and I should say worthy of more extensive cultivation. Damsons about here are almost a failure. Dessert Cherries have been fairly good; Morellos promise well, but black fly has been troublesome and requires constant attention to keep it under. Peaches on outside walls are good considering the severe test they were put to from March 20 to March 24, when they were in full bloom, no less than 16° of frost being registered at that time. Fish netting placed four thicknesses proved only a slight protection, but where canvas was employed and kept a considerable distance from the wall a much fuller crop was ensured. Blister has again been prevalent, but not quite so bad as last season. Strawberries, although looking so strong and healthy in the spring and showing an abundance of bloom later, have been poor and much below the average. Prices have ruled high. Last season, when plentiful, good fruit was selling at 1s. per gallon, while this season 1s. 6d. and 2s. are asked for fruit of inferior quality. Royal

Sovereign is the variety chiefly grown. Raspberries are a fair crop. These seem to withstand the drought better than many kinds of fruit. Superlative is the favourite variety, and it well sustains its reputation of being a consistent and good bearer. Gooseberries, White, Black, and Red Currants are heavy, especially some trees trained to a north wall, which will keep up the supply after those in the open are done. Filberts are an average crop.

Vegetables on the whole are a very good crop. Early Peas have been good, but rain is much needed to help forward the later kinds. Potatoes are excellent where the ground is in good tilth; otherwise they have suffered from the drought. Greens have been much infested with green fly, an unique experience probably caused by the drought.—J. LEWIS.

Wrest Park, Beds.—The fruit crop this season is anything but a satisfactory one, owing no doubt to the frosts we had when most of the fruit trees were in full blossom. The late Peaches and Nectarines suffered very much from the severe frosts experienced about March 20. Apples are not an average crop here this season, and will be small owing to the dry weather. The Strawberry crop was of very short duration. As far as I can ascertain it has been the same nearly all over Bedfordshire.

The vegetable crops are very satisfactory on the whole, and good crops have been gathered of all kinds of early vegetables. The drought is beginning to be felt very much in this neighbourhood, as the rainfall has been very poor since May; consequently all kinds of late vegetables are showing signs of the drought, and Potatoes and a great many other crops will suffer accordingly.—GEORGE MACKINLEY.

Battle Abbey.—Apples very good. Pears average on walls, none in open ground; dropped during frost and winds in May. Plums light; Peaches and Nectarines light; Quinces and Medlars heavy; Cherries light; Strawberries heavy crop, very fine fruit, especially Royal Sovereign and Latest of All, which I find treated as annuals are much the best for dessert. Raspberries, Currants, and Gooseberries heavy crop. Most of the stone fruit dropped during the cold we had in May. We had 4° of frost each morning from May 23 to 29. Strawberries were all covered up or we should have had none.

Vegetables are remarkably good all round, especially Peas and Potatoes, which I have not seen better. The ground here being very heavy and deeply worked, dry weather suits it the best.—WM. CAMM.

Coombe Park, Whitechurch, Reading.—Fruit crops in this neighbourhood suffered very much from late spring frost, especially on the lower ground. Strawberries, except some of the late kinds, are quite a failure. Gooseberries, Currants and Raspberries are fair. Cherries are good, especially on the higher ground. Apples, Plums and Pears are poor with the exception of a tree here and there. Filberts and Walnuts are good. Trees and all kinds of vegetation in this neighbourhood suffered very much last season from drought, from which many have not recovered.—E. TROLLOPE.

Widmore Court, Bromley.—Apples on bushes and trained trees are a very good crop; orchard trees are rather light. Cherries in this garden are only a moderate crop, but there are splendid crops in the neighbourhood. Black Currants are a very fair crop and fruit fine. I think by what I have seen they are rather above the average. The mite is bad here. Red and White Currants are a splendid crop; in fact, one of the heaviest I have seen in this district. Figs outside are a very fair crop. Gooseberries are a fair crop and fruit fine. We seldom get extra heavy crops in this locality now, as the sparrow claims his share in the early spring. Plums on walls are a very fine crop; on bushes and standards there is a light crop. Peaches outside are very poor. Raspberries very good fruit. Strawberries have been very disappointing in this

locality this year; in private places the crops have been very fair.

VEGETABLES.—Spring Cabbages have not been so good here, nor, in fact, in the whole neighbourhood this year. Potatoes are only a moderate crop here, but very fine in the fields.—ALEX. MCGILASHAN.

Walhampton Park, near Lymington.—I find Apples a good crop in general, Pears a fair crop, Plums bad, Peaches and Nectarines bad, Cherries fair, Figs good, especially Brown Turkey, which always does well here. All small fruit a good crop.

Vegetables have been in general a good crop, but owing to the long severe drought in this part are now almost a failure.—J. SOUZA.

Beckett Gardens, Shrivenham, Berks.—The fruit crop in this neighbourhood is below the average. Apples and Pears are very scarce, Plums good, Damsons poor, Apricots (outside) moderate, Cherries good, Figs (outside) good, Currants, Gooseberries and Raspberries very good; Strawberries have been a failure.

Vegetables are good. Early Potatoes are small, second earlies good. The main crops are looking well, but are in want of rain; the same also can be said of the Peas and Beans. The Onion crops are very good and quite free from maggot. The root crops are especially good. The winter greens are in want of rain to strengthen them, or else they will get another attack of the caterpillar, which did so much damage to them last year.—H. WRIGHT.

Loseley Park Gardens, Guildford.—All bush fruits are abundant. Gooseberries, Currants and Raspberries are a full crop. Strawberries are almost a failure, owing no doubt to frost in May. Plums are better than for some years past, but cannot be considered a full crop. Pears are much below the average. Apples are very satisfactory, although not up to the average. Nuts are plentiful.

The vegetable quarters have suffered much from the drought and excessive heat. Peas are fairly good, but the season was soon over. Potatoes are looking well.—H. SAWYER.

Colworth, Sharnbrook, Beds.—Apples are a good crop; Apricots none; Currants very heavy; Cherries good; Damsons light; Gooseberries abundant; Mulberries good; Pears medium; Plums good; Peaches none outside; Raspberries very good; Strawberries very light.

VEGETABLES.—Peas very good, but promise to fail soon from want of rain. Potatoes promise well.—J. HOAD.

Bayham Abbey Gardens, Lamberhurst, Kent.—The fruit crops are on the whole satisfactory. Apples with us are thin, but better with others near. Pears are an average crop, and will, I think, be good. Plums are average. Peaches and Nectarines suffered very severely from frost and later from blister: Apricots are thin; Nuts a fair crop. Strawberries, with the exception of Royal Sovereign and Waterloo, are not very good. Raspberries are an immense crop, as are also Gooseberries. Currants of all sorts are good. Cherries thin, except Morellos, which are a heavy crop.

Vegetables are as a whole good. Early Peas are good, but main-crop ones are infested with thrips, which is very prevalent here, and if not checked entirely spoils the crop. Carrots are very scarce, a great part of the crop going off when quite young. Onions, Potatoes, Celery, &c., are good.—G. H. SAGE.

Kingston House Gardens, near Abingdon.—Apricots are poor; Peaches and Nectarines average; Cherries and Plums poor; Apples average, the earliest blooming trees loaded, later flowering sorts a complete blank; Pears poor; Strawberries a light crop and soon over; Raspberries good; Gooseberries very light; Currants enormous crops; Nuts fair; Walnuts thin, a good set, but the majority have since fallen.

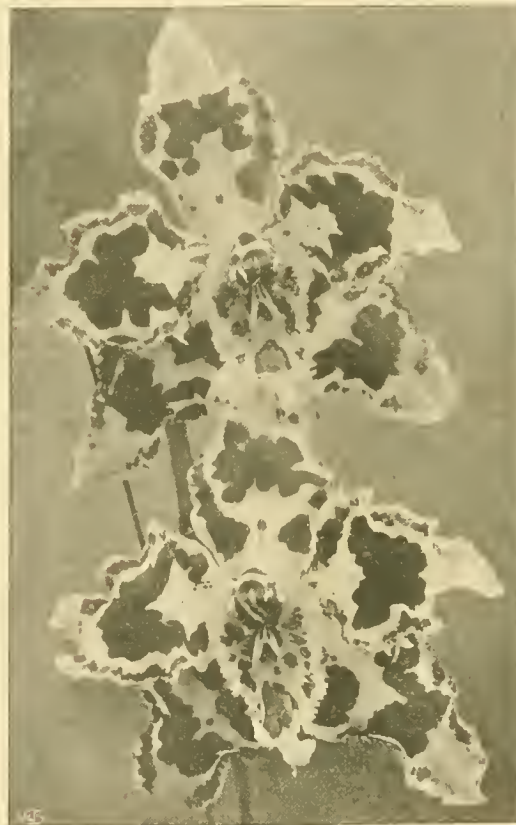
Vegetables have been, and still promise to be, grand; in fact, during the ten years I have had

charge of these gardens I have never had such crops, though I must say we have been very fortunate as regards rain, many of our neighbours not having had a drop when we have had heavy thunderstorms.—A. J. MORRIS.

ORCHIDS.

SOME RECENT ODONTOGLOSSUMS.

THE number of really good *Odontoglossums* that have made their appearance during the past six months is remarkable. Recent importations have been undoubtedly rich in superior forms of *O. crispum*. I recently visited a collection where *Odontoglossums* are a speciality, and I was surprised, among the number of plants blooming for the first time in this country, to find scarcely a poor-shaped flower or one wanting in substance. There were some hundreds of spikes expanded at the



Odontoglossum crispum Franz Masereel. From a photograph sent by Mr. H. J. Chapman.

time. The high prices also which good forms realise when offered for sale give every encouragement both to the importer and grower. *Odontoglossums* were never in greater demand than at the present day and sensational prices are often obtained for the best of the typical form, more particularly for distinctly spotted varieties. I propose noting some of the best forms that have been exhibited during the present year.

One of the first to make its appearance was the subject of the accompanying illustration, *Odontoglossum crispum* var. *Franz Masereel*. This plant was exhibited at the Royal Horticultural Society's meeting on February 28 last by M. Jules Hye, of Ghent, when the Orchid committee awarded it the society's silver Flora medal. It had previously been certificated

when shown by M. Vervaeet on November 13, 1894. It is certainly one of the most distinct and lovely varieties that has ever been seen. The outside of the sepals and petals is beautifully blotched with bright rose-purple, marbled with white, the front of these segments having a ground colour of white, through which is reflected the purple from the back, giving each the appearance of having a rose suffusion. The sepals are blotched and marbled with rich maroon markings. The petals, as shown in the illustration, are more evenly marked, and the large blotch which covers nearly the whole of the centre area is slightly deeper in colour than are the markings of the sepals; the band around the toothed white edges is of a similar colour, as are also the smaller lines and spottings towards the base. The lip is white, shading to yellow on the disc. The large spot in the centre and the smaller ones towards the base are bright brown. The cut raceme carried three flowers. On March 14 a lovely form was exhibited by M. Jules Hye as *O. c. Sultan*. It is a very brilliant form, and one in which the white, tinted rose ground colour has been almost obliterated by the deep reddish purple, large irregular blotches. All the segments have a very narrow margin of rose, tinted white. Through the big blotches the ground colour runs in irregular narrow lines. The lip is large, white, with deep yellow disc and bright purple spots in front. The flowers were nearly 3 inches in diameter, but the shape was somewhat loose, the segments not overlapping each other, as in the better shaped forms.

It would be interesting if some of our *Odontoglossum* experts would give us the distinctive characteristics by which we might distinguish the difference between *O. c. Sultan*, *O. c. Sanderianum*, and *O. c. Hyeatum*. Mr. de B. Crawshaw will, perhaps, be kind enough to give us what is desired here. On April 18 Mr. E. Ashworth exhibited and received a first-class certificate for *O. c. Ashworthianum*. In this the sepals and petals are almost wholly rich brown, marbled and margined with white. The broad lip has a wide margin of white, centre deep brown, mottled with white and having some yellow on the disc. The plant carried a raceme of six flowers. It resembles *O. c. Baroness Schroeder* to a great extent. The only distinction between the two is that the markings in Mr. Ashworth's plant are brown; whereas in *O. c. Baroness Schroeder* the spotting is of a deep purple. At the meeting on May 16 Mr. T. B. Haywood exhibited *O. c. Purity*. In this the flowers are almost pure white, only a slight trace of rose in the sepals and the yellow on the disc of the lip being apparent. The flowers are of remarkable form and substance. At the same meeting was also shown *O. c. Raymond Crawshaw*. This promises to be one of the finest forms of *O. crispum* in cultivation. It was not expanded when shown, but on seeing the flowers later, I was surprised at its attractive and distinct characteristics. Particulars of this were given on page 446 of the last volume of *THE GARDEN*. *O. c. Arthur Brisco* was exhibited by Mr. W. Thompson, of Stone, Stafford, at the Temple show. It is a distinct variety of fine form and substance. The sepals are white, with some

indistinct purple through the centre. The centre area has several rich, large purplish spots. The petals, much toothed at the margin, have a pure white ground and several large blotches of purple in the centre. The lip is white, shading to yellow on the disc, the centre area having several large brown spots. At the same meeting M. Jules Hye showed *O. c. Etoile du Congo*, a pretty form. The sepals are white, having large blotches of brown in the centre area, the petals also white, with spottings of the same colour as the sepals towards the base, the lip white, with a yellow disc and some brown spottings in the centre.

In M. Linden's group at this show was *O. c. var. Miss Linden*, in which the sepals are white, suffused with rose, and thickly covered with numerous small brown spots. The petals are white with some purple in the centre, where there are also numerous small brown spots. The lip is white, shading to yellow on the disc, with some brown spots in the centre. At the Drill Hall meeting of June 27 two remarkable forms were exhibited. The variety *O. c. Seraphim* from Mr. de B. Crawshay is almost white; only the faintest tint of colour could be traced on the bottom sepals of the lowest flower on the spike and the yellow disc of the lip. It also had some brown spottings on the column. The flowers were each considerably over 4 in. in diameter. *O. c. purpurascens* came from the collection of Sir T. Lawrence, Burford Lodge, Dorking. It is a distinct and desirable form of the *O. c. Starlight* section, the flowers being white, tinted with rose, the segments thickly covered with miniature lilac-purple spots, the lip having some large brown spots in the centre.

Odontoglossum crispum Rochfordianum was recently noted in flower in the nurseries of Mr. T. Rochford at Turnford Hall, Broxbourne. It is by far the best of the many good things that has flowered among Mr. Rochford's imported plants. It may be well to mention that there are 100,000 plants of *Odontoglossum crispum* in cultivation here, and as the majority of these are unflowered there will no doubt be found many fine and valuable varieties among them. The sepals are about an inch wide, the ground colour white, heavily suffused around the outer margins with deep violet-purple, the central area thickly covered with large yellowish tinted brown spots. The petals are of beautiful form, $1\frac{1}{2}$ inches across, much toothed on the margins, the ground colour white, with some violet-purple at the apex and spottings of the same colour near the margin at the base. The whole of the central area is one large blotch of yellowish brown, marbled and mottled with white. The broad lip is white at the apex and around the margin, the centre area covered with one large blotch of chestnut-brown, the bright yellow disc having several spots and lines of the same colour on it. The plant carried a three-flowered raceme. As in *O. c. Franz Masereel*, the remarkable coloration of the segments can be seen from the exterior of the flowers. H. J. C.

Masdevallia radiosa.—I consider this one of the best of the *Masdevallias* of the *Chimera* section and a very distinct and interesting plant. The leaves are tall and strong, and the spikes push out over the sides of the basket or pan in which it grows. These produce several blossoms in succession, one falling and another taking its place, so that it is often in flower. The tube part of the flower is bell-shaped, open in front, and of colour a brownish yellow, this part being covered with deep purple hairs, the tails purple. The lip is small, white, spotted with rose and black. A native of New Grenada, it should be grown in a house where the tempera-

ture does not fall below 50° in winter, with very cool quarters in summer.—H.

Chysis bractescens.—This plant is certainly much better grown than it used to be, and the improvement in the materials used in fumigation has helped towards this end. The ease with which insects can be kept at bay has much more to do with improved culture than many people are aware of, and I was reminded of this on seeing a lot of very healthy plants of this *Chysis* recently. The plant does best in a fairly strong compost in which good loam figures largely. The structure of the roots seems to point to a lot of moisture being necessary both in the atmosphere and in the compost. Not very much heat is needed, but the temperature must be high enough to induce free growth, which must be well ripened by exposure to sun and air in autumn, or flowers will not be forthcoming in spring.—H.

SACCOLABIUMS.

JUST at this time of year all Orchids with distichous leaves from a single stem are growing very freely and require considerable care. The principal difference between these and the pseudo-bulbous division is that the latter may be dried off and ripened, so to speak, this process taking place more or less suddenly according to the likes of individual species. With distichous-leaved plants this sudden change would not do, and in consequence the ripening must go on during the whole of the growing season, the leaves being consolidated as they are produced by the action of sun and air. No genus in this section likes more light and sun than *Saccolabiums*, and it is especially necessary now to all the winter-flowering kinds, such as *S. giganteum* and its varieties and allied kinds. In the depth of winter, when the conditions under which the plants are grown are at their very worst, these plants have to perfect and produce long racemes containing an enormous number of flowers, and, if allowed, to carry them for several weeks. Unless the plant has plenty of stamina in it it will not stand this strain, and now is the time to prepare for it by exposing every leaf to the light and allowing as much as possible of the health-giving air to play about them. In winter this cannot be done, of course, and the fact of the plants mentioned flowering at that season is one of the most difficult points to get over in their cultivation. If this consolidating treatment is neglected now, it is very probable the plants will not flower at all; while if they do, the blossoms will be poor and watery in colour and thin in texture. Again, the plants will show their weakness by the foliage dropping in spring, a certain sign that something is wrong and the most reliable symptom of distress.

Turning to the *S. Blumei* section, the plants here are somewhat different. They have not the same great fleshy foliage that the kinds I have mentioned above have, and anyone unacquainted with Orchids may think that they were more difficult to grow on account of this seemingly weak habit. But it is not so, and with fairly good treatment *S. Blumei* and its allies can be grown on year after year in comparative certainty of arriving at large specimen size, a very uncertain goal for *S. giganteum* or *S. violaceum*. At the time this ripening process is going on it is not feasible to reduce the atmospheric moisture as we do for *Dendrobiums* and other tropical Orchids. Doubtless in their native habitats they are exposed to conditions of climate quite as severe as the *Dendrobies*, but under cultivation this will not do, and it is necessary to keep up the atmospheric moisture or lose the foliage. All through the summer light dews from the syringe may be given

daily over the foliage, but these should now be discontinued, excepting on very bright days. The house being closed early, the temperature will run up rather high, producing just the conditions the plants like, especially the dwarf kinds, like *S. Hendersonianum*, *S. miniatum*, and *S. curvifolium*. These are usually grown in small baskets or pans quite close to the roof-glass, and though the larger kinds mentioned above like equally as much light, the receptacles should be rather larger, especially for *S. giganteum*, the immense roots of which will push through a fairly large amount of rough, open compost and drainage. *S. Blumei* does not require quite so much root-run, though when the plants are large and healthy they make a fair amount of root. All are beautiful plants that may with advantage be added to any collection of Orchids however select, and many of them flower during a dull season for Orchids.

Lycaste lanipes.—This is one of the most free-flowering of *Lycastes*, and a good plant of it in bloom has a very fine appearance. The spikes crowd up around the large bulbs and each bears a single flower. The sepals and petals are rather narrow, the former greenish, the latter ivory-white, as is also the singularly shaped lip. In a cool, moist house it may be grown in rather large pots, equal parts of peat, loam fibre, and Moss finely chopped making a good compost. Rather liberal supplies of moisture are necessary at the roots, especially, of course, when the growth is most active.

Oncidium prætextum.—Grown in a light part of the Cattleya house this fine *Oncidium* flowers well and freely, and is one of the best of the autumn-flowering members of the genus. In habit and manner of flowering it resembles *O. crispum* rather closely, the flower racemes arching and often branched, containing when strong a large number of bright yellow and brown flowers. A raft or very shallow basket suits it well, so that the roots may not be hampered by a lot of compost, but push readily through it and into the air of the house. Plenty of moisture both at the roots and in the atmosphere is necessary, and in order to avoid distressing the plant, it is wise to cut the flowers after a week or so. The bulbs are not particularly large for the immense spikes that they produce, and it is a pity to weaken the plant just for the sake of another week's display. In order to avoid disturbance of the roots, it is well when placing the plants in the baskets or on the rafts to keep the leads as near the centre as possible, using also the best description of peat and Moss for compost. These materials, in conjunction with a few crocks and a little charcoal, will grow it well.

Watering Cattleyas.—Little as I believe in overwatering these Orchids at any time of the year, I am convinced that in quite a number of cases they get far too little now that the pseudo-bulbs are finishing and the roots very active. The effect of lack of water at this time of the year is that the bulbs finish up prematurely, and in consequence break weakly in spring. These growths are more apt to damp off than are those that start from fully developed buds and pseudo-bulbs, and though it seems somewhat of a contradiction, the lack of moisture leads to damping. Water with freedom, then, until the pseudo-bulbs are fully matured, and not until then reduce the supply a little. I have never seen the good effects that are supposed to follow the drying-off of *Cattleyas* in winter to such an extent that both leaves and pseudo-bulbs shrivel, and in the majority of cases the plants are quite free flowering without any such proceeding. It is as wrong to go to one extreme as the other, and the shrivelling can but detract from the beauty and strength of the flowers when they do appear. When it is done with such kinds as *C. aurea* or *C. gigas*, certain plants of which do not always flower as freely as desirable, it is worse than useless, as

weakens the plant with no corresponding benefit.—H. R.

Dendrobium Aphrodite.—In its native country this plant is found growing high up on the branches of tall trees in company with *D. albo-sanguineum*. It is useful in making a pretty show after the usual deciduous Dendrobes are over, and is rather more difficult to keep in health than the majority of these. The pseudobulbs are stem-like, swollen at the nodes like those of *D. Findlayanum*, and the blossoms look extremely pretty towards the upper ends of these. The sepals and petals are creamy white, and the lip has two maroon blotches, one on either side. In growing *D. Aphrodite*, it is well to see that whatever is used as compost is not likely to quickly decay, and very good results have been obtained by growing it on blocks of Tree Fern stems. Here, of course, the plants can remain for a number of years without disturbance, and this suits them much better than pot or basket culture. Baskets and composts decay and the roots sicken, but the natural roughness of the Fern stems suits the roots well. They are very light, too, and may be suspended as easily as a basket. Ample light is essential all the year round, and a good deal of care is necessary to keep yellow thrips in check.

ANÆCTOCHILI.

EXCEPT in a few well-known places, the culture of these singularly beautiful Orchids is not attempted, some at least being extremely difficult to grow. But the beauty of the foliage, unsurpassed in some cases by any other plants, should tempt more amateurs to try and grow them, starting with some of the least expensive and strongest-growing kinds, and gaining a little experience before going in for them largely. It is usual to grow them in a stove temperature under hand-glasses in order to retain atmospheric moisture, and a great deal depends upon the temperature being kept regular and always moist. The plan of watering overhead has been the cause of many plants dying. Although they like the atmosphere absolutely saturated with moisture, this in the morning settling in the form of dew all over the plants or at any time when the glasses are not tilted, still they do not like water poured on them from a syringe or even a sprayer. The roots, in fact, would probably be better not watered from the top provided sufficient moisture could be brought to them in any other way, say by plunging in Sphagnum Moss and keeping this always moist. But this makes the Moss grow so rapidly that it is difficult to keep it in place, and by far the nicest specimens I have seen were grown in small pots simply standing on a bed of finely broken coke. The position was a light stove, and no sunshine could reach the cases in which the plants were grown. The lights were tilted a little for a couple of hours daily, and the air of the house kept as moist as possible while this was done. Beyond this the plants had no air except what filtered through the joints of the glass and woodwork. No peat was used, simply chopped Moss and a little half-decayed leaf soil, these materials being apparently sprinkled among broken pieces of crocks and bricks, which formed the bulk of the compost. A very small fine-rosed can was used twice daily, so that the coke was always moist, and the roots were only watered at long intervals, the moisture rising and keeping the crocks and Moss moist.

The propagation of these plants is extremely easy when the rhizomes are strong enough to bear it, and simply consists in cutting off the tops or any part that has a tuft of leaves and a few roots and setting the cuttings going on their own account. The temperature most suitable is about 70° by day and 65° night in winter, raising these 10° in summer and keeping them very regular. One would think in such a case as that described insects could not live, but thrips occasionally put in appearance and give a lot of trouble. Fumigation is out of the question, and very careful

sponging with a weak solution of tobacco water is the only safe remedy. H.

FLOWER GARDEN.

RUDBECKIA GOLDEN GLOW.

We are all familiar with the Black-eyed Susan, the *Rudbeckia hirta* of the botanists. *R. laciniata* is a near relative, and in its typical form somewhat resembles it, except that the disc flowers, those minute blooms covering the cone, are of a dull greenish colour instead of yellow, and the whole flower larger. In the doubling up of the Golden Glow, these disc flowers have

it a double *R. laciniata*. Mr. Childs gave it the name Golden Glow, and I bought from him in order to compare it with those received from Mr. Jensen. They proved identical. Mr. Jensen had seen in the autumn of 1895 a large clump of it in the garden of a German in Chicago, who had received it a year or so before from a relative, and traded some Geraniums for a few roots. This traces it back to 1893 or 1894. At this latter date it was blooming both in Mr. Child's place and in Chicago.

A writer in an English paper about a year ago claimed that it was introduced to English gardens nearly twenty years ago under the name *R. levigata*. Mr. Wm. Falconer, of Schenley Park, Pittsburg, Pa., dispelled this



Rudbeckia laciniata flore-pleno (syn., *R. Golden Glow*).

changed into ray flowers. The Black-eyed Susan will thrive in dry soil, but the other, being indigenous to the borders of swamps and low meadows, requires a fair amount of moisture. The origin of this double form is yet unsolved. About 1894 John Lewis Childs found it in his grounds among some unknown plants sent him by some of his customers. From it he increased the stock that has, in the main, reached the gardens of the United States and Europe.

While I bought three plants in the spring of 1896 from Mr. Childs, I had three given me in the autumn of 1895 by Mr. Jensen, the superintendent of Humboldt Park, Chicago, who called

attention to it in a clear and forcible manner. The mere fact that a plant so attractive in all its parts, so hardy in constitution, so readily grown and rapidly increased, was unknown in this country until within the past few years, even in the largest collections and among the most intelligent professionals and amateurs, is evidence enough that it was not known in English gardens twenty years ago.

The group illustrated is composed of the three plants obtained from Mr. Childs which were placed in their present position in the spring of 1896. Some young plants from the outside of the group have been taken away. The group is supported and protected from

damage by the winds by an iron hoop 4 feet in diameter, placed about 4 feet from the ground, and fastened to four strong stakes set among the plants. This is put in place when the plants are some 5 feet high. The hoop—which is of round iron—is slipped over nearly all the plants. Enough of the outer row of stalks is left outside the hoop to hide it and the stakes; these are then distributed evenly along the hoop and tied loosely, allowing each stalk 3 inches or 4 inches play. When a heavy rain accompanied by winds comes they are apt to become top-heavy and may break. In such cases I run temporarily a heavy but soft string around the whole group, well up towards the top, and draw it in quite closely, thus bunching it as one would a sheaf of wheat. This is removed when the storm is over and the blooms dried off. In this way one stalk supports the other and damage is seldom done. It forms such a strikingly ornamental group upon the lawn that it pays to devote some extra care to it. The drip from a lawn hose connection is carried under this group by tiles, thus affording it an extra amount of moisture. Where plants are not given enough water the blooms are smaller.—W. C. E., in *American Florist*.

Acanthus mollis latifolius.—Buried among other perennials, each fighting for the mastery, this is not particularly showy, but give it room to properly develop its fine foliage and sufficient moisture and food to produce large, vigorous spikes, and its beauty is beyond question. The rosy-tinted form is always a noble plant when grown in this way, and any of the varieties are singularly striking and effective in large, bold clumps. They also make a welcome change from Delphiniums and other well-known herbaceous plants, besides which they flower late in July and August when many of these are getting past their best.

Tritoma grandiflora.—This is one of the few herbaceous plants that have a good effect in the landscape, the broad, handsome Aloe-like foliage and very bright red spikes of blossom showing up at a great distance and sure to attract attention. The upper portion is of the brightest red imaginable, then a golden yellow, and lastly green. To grow it well, stations should be cleared, and if the soil is poor, removed, filling up with good rich compost. This will allow of its making ample growth and throwing up spikes of noble proportions 6 feet or more high. The stations should be kept weeded for a time, and good manurial support in some form or another supplied annually.

NOTES AND QUESTIONS.—FLOWER.

Galea officinalis.—This and its white variety *G. o. albidiflora* are useful for cutting at this time of year. Although in many cases they are left in the ground for a number of years, it is better to take up the plants occasionally, divide them, and replant in fresh positions. An open, sunny position backed by evergreens is best for them, as when in flower almost the whole of their own foliage is hidden.

Potentilla formosa.—Very beautiful just now are large, loose clumps of this fine herbaceous plant. There are hundreds of flowers produced in loose heads, the colour a pretty crimson, and it is as useful for cutting as it is pretty in the open. *P. formosa* likes a fairly stiff, not too rich soil, in which case it may be planted near the front, where in late summer and autumn flower is scarce, most dwarf plants being over.

Iris Straussi.—This was first found in the environs of Sultanaabad, in Persia, by M. Th. Strauss, and grown by Herr Max Leichtlin. This little Iris belongs to the section *Pogoniris* (*Iris barbatus*). It is of low stature (under 3 inches), with narrow leaves and a two-flowered stem. The flower is of fair size and of a brown-violet colour. It is well adapted, from its dwarf size, for the rock garden.—*Revue Horticole*.

Iris aegyriaca.—Native of the Euphrates valley, this was described by Hausknecht in 1896. It is a very handsome plant, 20 inches in height, leaves a fine

green and undulating, sometimes 12 inches in breadth. The six or eight flowers, opening from the summit of the stem downwards, are close upon 4 inches in diameter, and generally of a very pale uniform lilac colour. It is robust and free-flowering. Out of doors under a frame it flowers about the end of March. Like all frises of the Juno group, it requires to be protected in winter, and, above all, requires a period of rest and absolute drought in summer.—*Revue Horticole*.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

AUGUST 15.

For a mid-August gathering, the display both of fruit and of flowers brought to the Drill Hall on Tuesday last was highly creditable. The open-air flowers were excellent considering the excessive heat and drought. The fine collections of herbaceous Phloxes shown at this meeting merited all praise; indeed, had it been one of those moist or dripping seasons they could hardly have been better. Dahlias were on this occasion noteworthy for their freshness and general good form. Gladioli too were good, some especially so, yet here we would fain see what has long been needed in these things, a different mode of exhibiting them, even though the change were but a modification of the present straight-laced method, which is quite unrelieved by aught else, thus presenting a never-ending glare of rich colours to the eye. Some fine Caladiums too were shown, though these would appear to have reached a point of excellence beyond which they cannot pass. Roses also were very good, and the Orchids if not numerous contained some beautiful and interesting things. Some excellent fruit was also shown.

Orchid Committee.

A first-class certificate was awarded to—

LÆLIO-CATTLEYA WIGANÆ (*L. purpurata* × *C. Dominiana*).—This is a lovely hybrid surpassing in beauty the lovely *L.-C. Dominiana*. The sepals and petals are of fine form and substance, deep rosy lilac in colour, the lip, upwards of 2½ inches across, of a deep crimson-purple, veined with a darker shade of colour at the base. In front of the throat there is a large blotch of deeper purple, from which there run numerous veins of the same colour extending over the whole of the front surface. The side lobes are similar in colour to the front lobe, becoming suffused with a bronzy yellow at the base and through the throat. The plant carried a three-flowered raceme. From the collection of Sir F. Wigan, Clare Lawn, East Sheen.

Awards of merit were adjudged to the following:—

CATTLEYA WHITEI.—A supposed natural hybrid between *C. Warneri* and *C. Schilleriana*. The sepals are deep bronzy, tinted and suffused with rose, the petals deep rose, of fine form and substance, the lip flat as in *C. Schilleriana*, deep rose-purple, much fringed on the margin, the side lobes rose tinted with purple, shading to yellow at the base. It is in every way superior to the original form, each flower being upwards of 8 inches across. From Sir F. Wigan.

SCHOMBURGKIA LYONSI.—In this the flowers are each about 2 inches in diameter, the ground colour white, thickly covered over the sepals and petals with deep plum-purple. The lip has some yellow around the margin, the central and basal portion white, suffused with purple. The plant carried a raceme of fourteen flowers. From Lord Rothschild, Tring Park.

LÆLIO-CATTLEYA BERTHA FOURNIER (*L. elegans Schilleriana* × *C. Dowiana*).—The sepals are of fine form and substance, creamy white, tinted with rose, the petals white, mottled and tinted with rose, the broad lip rich crimson-purple in front, lighter on the side lobes, which are thickly covered towards the base with numerous yellow longitudinal lines. A cut flower came from Mrs. Mason, The Firs, Warwick.

STAUROPSIS LISSOCHILOIDES VAR.—This resembles the better-known *Vanda Batemaniana*, but it has smaller flowers. The sepals are yellow, spotted and mottled with dark brown, the petals more heavily suffused with brown and with fewer spots. The lip is rosy purple, shading to yellow at the base. The whole of the exterior of the flowers is deep rose-purple. A cut raceme of some two dozen flowers came from Lord Rothschild's collection.

Messrs. Hugh Low and Co. sent a very nice group. In the back row were several finely-flowered plants of *Vanda cœrulea*, a nice variety of *Oncidium varicosum*, and *O. Krameri*. *Dendrobium Lœcanum enfieldense* is a delicate form with buff-yellow and rose-tinted flowers. *Cattleyas* were well represented by fine forms of *C. Warszewiczii* (*gigas*) and several good forms of *C. Loddigesii*. The beautiful *C. superba* was well represented. A good form of *C. Dowiana* and *C. Eldorado* were also included. *C. Gaskelliana* in both light and dark forms, the most attractive being *C. Gaskelliana pallida*, whose flowers had only the faintest tint of rose in the segments, was also shown. *Odontoglossum crispum*, *O. Pescatorei*, and *Cochlidia Noezliana* were well represented. In the rare *Vanda Charlesworthii*, which is supposed to be a natural hybrid between *V. cœrulea* and *V. Bensonæ*, the upper sepal is rose, mottled with white, the lower sepals whiter, with only the faintest tint of rose. The petals are similar in colour to the upper sepal, the lip deep rose-purple, with some lines of white at the base. *Lælia Amanda*, *Lælio-Cattleya elegans*, and *L.-C. Novelty* (*C. Turnerii* × *L. Dayana*) were well represented. A silver Flora medal was awarded.

Mrs. Mason, The Firs, Warwick, sent *Cypripedium Frau Ida Brandt* (*C. lo* × *C. Youngianum*), *Dendrobium McCarthiae* with three flowers, a good form of *C. Warszewiczii* and *C. Fowleri*, in which the sepals and petals are deep purple, the lip, as in *C. Leopoldi*, deep rose-purple in colour. Captain S. Julian, Plymouth, sent a light form of *Cattleya Eldorado* and the beautiful dark *C. Harrisoniæ violacea*. The Rev. F. Paynter showed *Lælio-Cattleya Henry Greenwood* (*L. elegans Schilleriana* × *C. Hardyana*), in which the sepals and petals are very pale lilac, the lip crimson-purple, the side lobes rose, shading to yellow at the base; *Cattleya Harrisoniæ*, *C. Gaskelliana*, and a new hybrid, said to be between *Cattleya crispa* and *C. Warneri*, but no trace of the parents could be discerned. M. Jules Hye, Ghent, sent a fine form of *Cypripedium Mossianum*. Mr. McDonald, Pitlochry, had a new hybrid belonging to the *Cypripedium Rothschildianum* section. Mr. Norman, gardener to Lord Salisbury, sent a finely-grown plant of *Aerides Lawrenceæ* var. *Sanderiana* with four spikes of flower, and Mr. de B. Crawshaw showed *Odontoglossum crispum Trianae*, *O. c. Miss F. M. Bovill*, and a light form of *O. Uro-Skinneri* with an exceptionally large lip. Sir F. Wigan showed a distinct form of *Cattleya Aclandiae* and *Cattleya Atalanta*, in which the sepals and petals are bronzy yellow, suffused with rose, the whole of the front lobe bright crimson, the side lobes of the same colour at the apex, shading to white towards the base. The plant carried a raceme of seven flowers, each about 5 inches in diameter. *L.-C. Aurora* was also included.

Floral Committee.

A first-class certificate was awarded to

NEPENTHES BALFOURIANA.—A handsome form, having *N. Mastersiana* and *N. mixta* for its parents. In the new-comer the pitchers are very bold and well coloured, the inclination, particularly in respect to size, being towards *N. Mastersiana*.

The following obtained the award of merit:—

PHLOX LE MAHDI.—A very distinct kind with violet-purple flowers, quite the best of this shade that has yet appeared. From Messrs. W. Paul and Son, Waltham Cross.

ROSE GROSS AU TOPFLITZ.—A beautiful and showy Hybrid Tea, the flowers of a rich crimson-scarlet hue, in trusses containing twenty to thirty

buds. As a garden Rose this should prove of much value. From Messrs. W. Paul and Son.

GLADIOLUS BURNE-JONES.—A very fine scarlet, with flowers of immense size. From Messrs. Kelway and Son.

GLADIOLUS F. PAYNTER.—The finest orange-scarlet we have seen; indeed, it is more vermilion in its intensity, and in the compact spike is showy in the extreme. From Messrs. Kelway and Son.

GLADIOLUS LADY MONTAGU.—Here we have a lovely tone of yellow in a rather poor spike, yet a flower of great beauty and worth, the lower petals marked with crimson spots. From Messrs. Kelway and Son.

GLADIOLUS HENRI VAUDRIER.—A striking flower of the *G. Nanceianus* type, or this mingling with some other form. The blossoms are of large size, spreading widely and crossing the tips of the segments to the next bloom. It is of a distinct amaranth tone, though the throat is white spotted. From Messrs. James Veitch and Sons, Chelsea.

GLADIOLUS JANE DIEULAFOY.—This belongs to the *Lemoinei* section and is of a rose-salmon shade, the lower petals margined with the same colour and spotted with crimson on a white ground. From Messrs. Wallace and Co., Colchester.

CUPRESSUS LAWSONIANA WISSELL.—A distinct and pretty plant, for which it is difficult to find any comparison. It is removed from the ordinary forms of this plant by the forked tendency of the branches that assume opposite directions. It is quite neat and compact in growth and of a semiglaucous tone. From Messrs. J. Veitch and Sons, Chelsea.

DAHLIA (CACTUS) ANTLER.—A very handsome flower of a crimson-amaranth hue throughout. From Messrs. Burrell and Co., Cambridge.

DAHLIA (CACTUS) SYLPH.—A brilliant orange-red kind, the tips of the florets well incurved. From Messrs. Burrell and Co.

DAHLIA (CACTUS) AJAX.—This is of a salmon-orange hue, and not only distinct in shade from the last, but generally a larger and bolder flower. From Messrs. Burrell and Co.

HOLLYHOCK BLACK KNIGHT IMPROVED.—This is a descriptive term, the flowers being of a glossy maroon and very full. From Messrs. Webb and Brand, Saffron Walden.

CENTAUREA AMERICANA ALBA.—A very large and white-headed Cornflower of the annual class, though quite removed in size and appearance generally from anything we have before seen. The flower heads are each about 4 inches across and composed of long thread-like filaments, which are very numerous. From Messrs. Cannell and Sons, Swanley.

The *Caladiums* from Messrs. Laing and Co., Forest Hill, arranged on the floor, covered a very considerable space and contained all that is worth growing among these plants. Edith Lotter, bronzy pink, with silvery blotches; Charlotte Hoffman, small pure white foliage, with pale green stems; Rt. Hon. Jos. Chamberlain, blood-crimson, with green border; Souvenir de Louis Thibaut, reddish rose, a long and distinct oval leaf; W. E. Gladstone, rich crimson, grass-green margin, very fine; Aurore Boreale, dark red, spotted bronzy green, leaves of great size; and Barillet, green, crimson centre, were among the best. The entire group had a background of tall Palms, and was margined with the pretty *C. argyrites* and small Ferns (silver Flora medal). Messrs. J. Cheal and Sons, Crawley, had a fine lot of the newer Cactus Dahlias, many of which were remarkable for their beauty and colour. Of these, Ebony, blackish maroon; Countess of Lonsdale, rich salmon-red; Exquisite, a reddish apricot with long, claw-like petals; Ranji, deep rich maroon; Viscountess Sherbrook, terra-cotta, with apricot, were noteworthy. Among other things, *Veronica salicifolia*, *Colutea arborescens*, *Glyceria spectabilis* fol. var. and several *Eulalias* were noted. Messrs. Webb and Brand, Saffron Walden, had a superb lot of flowers of their well-known strain of double Hollyhocks, of which Leander, buff; Purity,

amaranth; Alf. Chater, rose; Hercules, buff and rose; and Black Knight, rich and glossy, were among the best (silver Banksian medal). A splendid lot of Dahlias came from Mr. Mortimer, Farnham, Surrey, the group containing the finest of the Cactus and show and fancy kinds. Of the Cactus kinds, Countess of Lonsdale, Captain Broad, Ebony, Magnificent, Lucius, Firebrand, Ranji, The Clown, Radiance, E. J. Deal (the finest scarlet yet raised), Wallace (a bright amber), Arachne, Mrs. J. Goddard, Starfish, Britannic, and Keyne's White were good. The show and fancy sorts were beautifully finished flowers, and were arranged on either side the Cactus forms (silver Flora medal). The group of *Campanula isophylla* Mayi from Mr. H. B. May, Dyson's Lane, Edmonton, was particularly fine, the plants even larger and better flowered than they appeared on a former occasion. More than this, the flowers now appear to have assumed their true character, as was seen in the more mature blossoms, which had a flush of reddish mauve at the tips of the lobes. The plants were splendidly grown, being a mass of flowers fully 18 inches high and nearly the same through. The plants were arranged amid a groundwork of Ferns, and in the mass made a very decided and attractive group (silver Banksian medal). The group of Ferns from Messrs. J. Hill and Son, Edmonton, was one of the finest ever brought to the Drill Hall, and was composed entirely of *Adiantums*, some sixty species and varieties being staged all beautifully fresh and clean looking; indeed, it was remarked in several quarters how well the plants were grown. Some of the finest and most distinct are *Reginae*, *cuneatum grandiceps*, *elegans*, *Faulkneri*, *Victoriae*, *Capillus-veneris imbricatum* (very fine in colour and in pinnae), *curvatum*, *roseum* (a pretty dwarf plant with rose-tinted fronds), *Hendersoni*, *asarifolium*, *tinctum*, *Fergusonii* (perhaps one of the handsomest of all), *tetraphyllum*, *Bessonianum* (also a very distinct form), and many more of the better-known kinds, all in capital condition and certainly meriting great praise (silver Flora medal). A considerable attraction too was the group of cut spikes of *Gladiolus*, though here we would prefer to see some change in the method of setting up, even if fewer spikes were shown and some other material introduced to act as a foil to the endless array of bright and beautiful colours. These latter too frequently cut each other, as it were, by the contrast of the flowers, and however beautiful in beds alone on the grass, scarcely show to the same advantage on the exhibition stand as now employed. Messrs. Kelway and Son, Langport, were large exhibitors of these, and though the flowers were good we do not hesitate to say we have in the past seen much finer spikes from the same source. Some attractive kinds were Sir M. Hicks Beach (salmon and white), *Raladora* (cerise and white), St. Gation (crimson with lines of white), Bullion (yellow), *Gallia* (rosy white, freckled with scarlet), *Princess Royal* (satin rose and white), *Zoe* (blood-crimson), *Wellington* (maroon), *Chopin* (salmon-scarlet), *Colonel Morgan* (soft pink with spots). A silver Flora medal was awarded. A very great attraction, too, was the Roses and herbaceous Phloxes from Messrs. Wm. Paul and Son, Waltham Cross, the former in vases and baskets arranged in groups, and the Phloxes in tall vases, in their great variety making a really fine display. Of the Phloxes alone some forty kinds were shown, and it certainly speaks volumes for the suitability of the soil and the district around Waltham Cross that in a season phenomenally dry these moisture-loving plants should appear so fine. Of these, the following are some of the best: *Lumineux*, salmon-scarlet; *Deroiche*, deep lilac; *Meteore*, salmon, white eye; *Beranger*, soft salmon; *Etna*, brilliant scarlet, very fine; *Esperance*, rose, lilac, and white; *Coquelicot*, orange-scarlet, a splendid colour; *Iris*, violet; *Fiancée*, pure white; *Embracement*, scarlet, &c. The Roses, too, were very beautiful, baskets and boxes of these in great variety, and indeed fine quality also (silver Flora medal). Another

capital lot of Roses and Phloxes came from Messrs. Paul and Son, The Old Nurseries, Cheshunt. Here many of the same kinds were noted, though of the Phloxes one or two excellent kinds call for mention. These are *Bayudere*, pure white; *Broxbourne Star*, white and rose; *Jocelyn*, very bright, colour of Etna; *Miss Pemberton*, fine salmon; *Feodora*, pale salmon; and *Mrs. Croft Murray*, salmon-rose. *Rudbeckia purpurea*, *Statice latifolia*, and a splendid spike of *Veratrum nigrum* quite 6 feet high were also here (silver Banksian medal). From Tottenham Mr. T. S. Ware sent a good batch of mixed hardy things, such as *Tritomas*, *Tiger Lilies*, *Statice*, *Sundflowers*, *Agapanthus umbellatus albus*, *Delphinium chinensis albus*, *Eryngiums* of sorts, Cactus and pompon Dahlias, together with a fine lot of single and double *Begonias*, which, so far as single flowers are concerned, would take some beating (silver Banksian medal). Hardy flowers from Messrs. Wallace and Co., Colchester, were very fine, particularly the *Liliums*, which formed so large a part of their group. Of *L. auratum* and *L. a. platyphyllum* there was indeed a grand display, the spikes of flowers very fine and the blossoms massive in appearance. *L. longiflorum giganteum*, *L. tigrinum*, and *L. rubro-vittatum* were equally good. Apart from these, a well-nigh complete collection of *Montbretias* was set up, these including the double-flowered form, though we confess to seeing more beauty in the single kinds. Some capital *Echinops Ritro*, blue and white *Caucasian Scabious*, *Anemone japonica alba*, *Gaillardias* in plenty, *Coreopsis*, and the finely-coloured *Platycodon Mariessii*, which is ever an attraction in any group, were also shown. Charming, too, is *Sidalcea malvaeflora Listeri*, a pink flower deeply cut at the margin. It is a capital subject in the open or in a cut state. Besides these were hosts of *Gladioli*, many of which are very fine, those in particular which belong to the *G. Nanceianus*, *Lemoinei*, or *Childsi* groups being especially strong, and, so far as the outdoor garden is concerned, valuable by reason of their greater general hardiness and freedom (silver Banksian medal). Another group of hardy flowers came from Messrs. Barr and Sons, Covent Garden, though in large degree it was apparent these things had suffered from the great heat of the year in conjunction with a soil hot, sandy, and dry. *Lilies*, *Phloxes*, *Aconites*, *Sunflowers*, *Gaillardias*, *Pentstemon barbatus coccineus*, *Hyacinthus candicans*, and such things were freely shown. A small collection of flowers of single and double *Begonias* came from Mr. H. J. Jones, and testified to the fine strain of these flowers. Messrs. Hugh Low and Co. had a small group of the golden Acer (*A. californicum aureum*), a fine golden-leaved plant quite distinct from *A. Negundo* forms. Messrs. J. Veitch and Sons had a variety of interesting things, among which a huge example of *Clorodendron trichotomum* with white flowers attracted some attention, being of considerable age and a mass of its flowers. *Pentstemons* in pots well grown and in great variety were also shown, together with *Clematis Davidiana*, *Apera arundinacea*, *Andromeda arborea* (small white blossoms), *Pharus guianensis albo-striata*, a set of the *javanico-jasminiflorum Rhododendrons*, and several more or less double varieties of *Begonia semperflorens*, representing white, rose, and scarlet shades.

A very handsome group arranged on the floor of plants grown within three or four miles of Charing Cross came from Mrs. Abbott, South View, Regent's Park (Mr. G. Kelf, gardener). The group in question was one of the usual order of such things, being composed of Palms, tall and dwarf, *Crotons*, *Dracenas*, *Tiger* and *auratum Lilies*, *Pandanus*, together with a great variety of *Celosias* in pots, the whole being margined with Ferns and other small plants. The group was of considerable size, too much and too densely crowded, as is most usual in such exhibits. A silver-gilt Flora medal was awarded. Another group of plants arranged on the stage came from Mr. P. Purnell, Streatham Hill. Here *Fuchsias*,

single and double Begonias, Ferns, and small Palms predominated (bronze Banksian medal). Capital plants and blooms of Nerium Oleander, red and white, were shown by Mr. F. W. Campion, Cowley Manor, Reigate (gardener, Mr. J. Fitt), for which a vote of thanks was accorded.

Fruit Committee.

There were some excellent exhibits before this committee in the shape of collections of fruit, but we fail to see why exhibitors should now stage Apples that are in season in winter.

A first-class certificate was awarded to—

TOMATO THE CHISWICK PEACH.—A very pretty fruit and of equally good quality. It is a sport from the Red Peach and originated in the society's gardens. This was recommended for a first-class certificate by the committee at Chiswick some time ago. There being a full crop of fruit, seed of this new variety will be sent to the Fellows of the society.

Awards of merit were given to—

APPLE EARLY VICTORIA.—A very early Codlin with great bearing qualities. This will be a profitable market fruit, being firmer than the Keswick or Manks, but quite as early. This is the result of crossing Lord Grosvenor with Keswick Codlin. From Mr. J. W. Cross, Wisbech.

MELON (UNNAMED VAR.).—This, a small, round, scarlet, netted fruit, was given an award of merit conditionally. It was stated to have been grown out of doors. On previous occasions the committee have refused to give an award to an unnamed fruit. They did so in this case and asked for a name and particulars. From Mr. D. Harrison, Merrow House, Guildford.

RASPBERRY BLACKBERRY HYBRID.—A dark fruit, very much like a Raspberry in shape, but different in colour. It is the result of crossing Raspberry Belle de Fontenay with the common Blackberry, and should make a delicious preserve, being of a brisk, pleasant flavour. The plant is a free bearer and grower. From Messrs. Veitch and Sons, Chelsea.

A very fine collection of fruit in pots and dishes came from Mr. G. Kelf, The Gardens, South Villa, Regent's Park, N.W., the background being Plum trees well laden with fruit, the varieties Early Transparent, Cox's Emperor, and Jefferson. The same kinds were also staged in dishes, with the addition of Kirke's, Golden Drop, but not ripe, fine Reine Claude d'Athene and Green Gages in variety, excellent Melons, Barrington Peaches very finely coloured, good Black Hamburg and Buckland Sweetwater Grapes, Tomatoes in variety, and some dishes of cooking Apples (silver-gilt Banksian medal). Messrs. Veitch, Ltd., Chelsea, had a varied collection of fruits, mostly early Apples and Pears, with Cherries and Currants, some three dozen dishes being staged. The best Apples were Lady Sudeley, Mr. Gladstone, Kerry Pippin, Duchess of Oldenburg, Yellow Ingestre, Duchess Favourite, Devonshire Quarrenden, Oslin, Red Astrachan, White Transparent (a pretty fruit), Early Julien, with several varieties of cooking Apples, such as Lord Grosvenor, Stirling Castle, Potts' Seedling, Dutch Codlin and Lord Suffield. Among the Pears were Summer Thorle, Doyonné d'Été and Beurré Giffard; La Versaillaise and Lee's Prolific Black Currant, with Morello Cherries, were also included (silver Knightian medal). Messrs. G. Bunyard and Co., The Royal Nurseries, Maidstone, staged twenty-five dishes of early Apples. There were fine fruits of Beauty of Bath, Early Julien, Duchess of Oldenburg, Ecklinville Seedling, Gold Medal, Golden Spire, Grenadier, Lady Sudeley, Lord Suffield, Potts' Seedling, The Queen, Stirling Castle and White Transparent (silver Knightian medal). Messrs. Spooner, Hounslow, also staged a collection of Apples, but there were more late varieties than in the other collections. Red Astrachan, Irish Peach, Yellow Ingestre, Stirling Castle, Ecklinville, Grenadier, Lord Suffield and Royal Jubilee were the best (silver Banksian medal). Mr. J. Miller, The Gardens, Ruxley Lodge, Esher, staged a very nice lot of fruit, including

a splendid dish of Early Rivers Nectarine from open walls, Royal George, Alexandra Noblesse, and Violette Hâtive Peaches, Kirke's Plum, Brown Turkey Figs, Cherries in variety, including Bigarreau Blanc d'Espagne, a late white variety; Apricots, Pears, Gooseberries, and a new Melon of nice appearance named A. Henderson (silver Knightian medal). Mr. H. Walters, Eastwell Park Gardens, Ashford, put up a nice collection of fruit, including Melons, Black Ham-burgh and Foster's Seedling Grapes, Pine-apple and Downton Nectarines, Sea Eagle and Violette Hâtive Peaches, well deserving the silver Knightian medal awarded. Some very fine Oranges came from Mr. S. E. Lamb, Forest Hill, S.E. Three new varieties of scarlet-fleshed Melons came from Mr. Wiles, The Rookery, Farnborough. Dwarf Beans Progress, Early Wonder, and Veitch's Hybrid were sent by Messrs. Veitch and Sons, Chelsea, and Tomato A. H. Gibson by Mr. Gibson, Ben Moore, Pinner.

The Royal Horticultural Society's certificates.—We were astonished to find on perusing the official list of the awards of the fruit committee on Tuesday last to find that an award of merit had been given to a Melon without a name. Having known something of the working of the various committees for the past twenty-five years, we understood that in no case could an award be given to any flower, fruit, or vegetable which was not, on being submitted to the committee, named. This rule has now been broken in the case of the above Melon, and we should be glad to know the reason. If any doubts were entertained as to the Melon, why not, as has often been done, ask the exhibitor to submit it again, the secretary of the committee informing him in the meantime that it is necessary that a name should be given and that all particulars as to the culture should be sent. This in bygone days was always the case, and why not so now?

NOTES OF THE WEEK.

Nymphaea stellata in the open air.—*Nymphaea stellata*, the sweet-scented blue Water Lily, has flowered in a lake at Carton, Kildare, this year. It had four open flowers the other day and was much admired as seen along with the best of M. Marliac's seedlings. This is the first time I have heard of its flowering without added heat or shelter, and think the fact worth noting. — F. W. BERRIDGE.

Platycodon Mariessi.—This is undoubtedly of the first rank among the whole host of hardy plants. In no sense is it an every-day-looking plant even prior to its flowering, and still less so when the richly coloured blossoms expand, for then it is one of the most valuable, as it is desirable and ornamental in any garden of choice hardy flowers. Any such plant is an acquisition and as such worthy of all care, as it is deserving of all praise.

Sweet Peas.—A week or two since the present season's display of these flowers seemed to have come to an untimely end, but the cooler evenings and early morning dews of late, coupled with the cooler breezes recently experienced, have given us a further supply of their welcome blossoms. Emily Eckford, Blanche Burpee, Aurora, Her Majesty, Blanche Ferry, and Countess of Radnor have been and are still making a brave show, and if only still more suitable conditions prevail there is every prospect of this display continuing.

Herbaceous Phloxes.—These usually hardy some flowering plants have during the last two years or so had but a sorry time, not one good head per plant resulting where the plants have had to shift for themselves, and where, too, they exist under quite ordinary conditions in the border. Spring-planted pieces have fared even worse in spite of the soil being deeply trenched and heavily manured. Root-watering, unless brought frequently to saturation point, is of but little avail so long as the atmosphere remains parched and dry.

Gentiana tibetica.—Though not one of the tallest or boldest of the Gentian family, this is yet one of the most vigorous and robust for its size.

It is a strong-rooted kind, and noteworthy rather for its vigour and distinctness than for its showy character. It is a white-flowered species, too, and in common with other whites of this family does not impress one in the same degree as do the beautiful and ever-welcome kinds possessing blue flowers varying in their shades of colour and richness.

Campanula excisa.—In this pretty species from Switzerland we have a well-marked kind, particularly distinct in the finely-cut foliage and frail stems that support the dainty and rather pale blue bells. The plant is but a few inches high, and certainly worth a good position in the rock garden, where in a pocket or snug recess it will be content in a mixture of soil and stones or grit. Frequently a capital substitute for grit is the sandy or loamy gravel that abounds in many parts, while in others burnt clay earth forms a capital substitute and is frequently quite easily obtained.

Tufted Pansy King of the Blues.—This has been one of the most pleasing and effective sorts throughout the recent dry weather, and at the present time it still remains in good form. This is one of the few good miniature flowered Tufted Pansies, and will prove effective where a Pansy with a deep blue colour is required. Unfortunately, the variety is little known, but those disposed to take it in hand may do so with every confidence. The constitution is robust, and although the plant has a good habit, it is not quite so compact as some others. It is also a free-flowering sort. — D. B. C.

Campanula isophylla Mayi.—Mr. May made a really fine display on Tuesday last with his new trailing *Campanula* when he staged a group of splendidly-grown plants, a veritable mass of flowers, at the meeting of the Royal Horticultural Society. The plants, too, appeared in better form than previously, the flowers having attained their full tone of colour, a charming shade of blue, with perhaps the merest suspicion of red-mauve towards the extremities of the lobe divisions of the corolla. This, however, is only visible in a certain light, while the mass of heliotropes, grey, rather than blue, flowers makes it showy indeed.

Heuchera brizoides.—I was pleased to read the note at p. 86 by "H. S." on the above, as I recently saw it in splendid condition in the garden of Mr. Hindmarsh, Alnbank, Alnwick. Mr. Hindmarsh, who is a great lover of hardy plants and who has got a very fine collection, grows many of the beautiful alpinists much better than we see in the south. *Heuchera brizoides* promises to make a splendid decorative subject, as the increased length of spike makes it more useful, and it remains good so long after being cut. The colour, though somewhat paler than in *H. sanguinea*, is of a pleasing shade and most effective in the mass. It is quite hardy, as Mr. Hindmarsh's plants are fully exposed on high ground. — G. WYTHES.

Acer californicum aureum.—It is perhaps a drawback to such plants as attain to tree-like dimensions ultimately that they are exhibited in a small and, so to speak, immature state. This Golden Acer is a case in point. The exhibitors knowing and appreciating its worth, and having knowledge of the more established original examples, have the highest opinion of the value of the plant from a garden point of view. At the same time it is scarcely possible in such a case to do justice to the plant by exhibiting it in pots about 7 inches or so across. That it is quite distinct from the well-known Japanese *Acer Negundo* forms is certain, and, provided the present colour is maintained when the plants are in the open ground, this Acer will be a decided gain to our gardens in the future.

Tufted Pansy Howard H. Crane.—The miniature-flowered Tufted Pansies for some reason have failed to create the interest that they deserve. First class sorts, it is well known, are limited in quantity, probably because so few of the novelties sent out a few years since came up

to the standard set by the parent variety—Violetta. The variety under notice has a robust constitution, is dwarf and compact, and at the present time is studded with its charming little blossoms, which are rayless and fragrant. The lower petals are rich yellow in colour, the upper ones being of a pale canary-yellow. Those who value Pembroke, one of the newer rayless sorts, will better understand the beauty of the variety under notice when it is stated it may be described as a miniature-flowered Pembroke.—C. A. H.

Gentiana asclepiadea alba.—While I think the blue Gentians superior to those with white flowers, I suppose that taste for something out of the common run, which we all possess in a greater or less degree, makes us prize the white-flowered varieties. The white Swallow-wort Gentian is, although not absolutely rare, so little seen, that it is doubtful if it is known except to those with a wide acquaintance with hardy flowers. Here I find it a little less robust and scarcely so free in producing its blooms as the typical blue form, but it is free enough and robust enough to justify one in mentioning it and in bringing it before the notice of those who like such flowers. I grow *G. asclepiadea* and its white variety in sunny places, and they flower well in such, even if not so tall as one sees them in some gardens. I do not like to see the Swallow-wort Gentian grown to an excessive height such as I have observed in some places.—S. ARNOTT.

Gentiana linearis.—The Gentians are such universal favourites, that any information regarding easily-grown species may be of service to some who have been baffled when trying to grow others less amenable to cultivation in our gardens. If I have this plant true to name, it is one which may be recommended as giving little trouble in the light dry soil here, and as likely to do well under similar conditions. I make the reservation as to name because, although I had the plant from a good source, the synonym of *G. linearis* in Nicholson's "Dictionary of Gardening," i.e., *G. pseudo-pneumonanthe*, makes one a little doubtful. The plant I have more nearly resembles *G. asclepiadea* than any other I can think of at present. It is, however, dwafier in habit and deeper green in leaf-colouring. It is here a good bloomer, and now that it has bloomed once more it looks pretty with its blue flowers lined with white in the interior. I have had it on a rockery here for some time, where in sandy peat it does well with a large amount of sunshine until about 5 p.m. *G. linearis* is an American species.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Sempervivum Hookeri.—This is by no means one of the least beautiful or distinct of the Cobweb Houseleeks, of which *S. arachnoideum* is the type. Its claims to distinctness are in the shorter, thicker, and more decidedly blunt leaves, which, as in *S. Laggeri*, are of a pale green tint, and the inclination in the growing rosettes at least to spread in a sort of reflexing way. This, however, is more or less transient, and with age, as also in the small offsets, a more compact rosette is formed. All the same, the plant is a well-marked form of this group, and I am not sure that the web itself is not even more white and dense than is usually seen. This I hope to prove another year with three forms side by side, one of these being a plant that some twenty years ago created some discussion by being named *S. Pomelli*. This name was, however, given conditionally, the plant to which it referred having reddish coloured leaves for a long time in spring. This, underlying the white web that adorns all these kinds, resulted in a pretty effect when in a mass on rockwork. The difference in the colour of the flowers in these webbed forms is not great, pink and reddish pink predominating in the hardy kinds at least.

Echinacea purpurea.—This handsome Cone-flower is now very beautiful, and at the same time distinct in its way. Such really good and finely coloured things are by no means plentiful, for it has no equal in its own race and no competitor from any point of view. Being slow in growth and also in its spread at the root, are

among the reasons why this fine plant cannot so quickly be formed into groups. Happily, however, the plant offers few if any difficulties from a cultural standpoint, and in quite strong loamy soil as well as in light, richly manured ground it grows well and flowers freely. As may be expected, there are inferior forms of this plant, possibly originally the result of raising seedlings, and those seeking a reliable stock may do well to see the plant in flower. Perhaps the Winchmore Hill variety of this plant is one of the finest forms, not merely in the size and breadth generally of the flower-heads, but equally in the richer colouring in the ray florets. Three feet or rather more in height and usually quite self-supporting, this is a telling subject in any garden. At a short distance, or even at a distance of 100 yards, the richly-coloured heads will not fail to attract attention.

Campanula carpatica pelviformis.—As one who has grown this very beautiful Harebell for a number of years I may be permitted to express the pleasure with which I read the short note which appeared in *THE GARDEN* of August 12. It is one of the flowers of which one would like to know where it originated, if a chance find or a seedling raised by some one. One feature about it is its stiff, firm habit which is noticeable even among the varied forms of the Carpathian Harebell. I know that some growers have been disposed to consider it either a distinct species or a hybrid, but there seems to be little but mere surmise to support this view. It seeds fairly well here, but I have never been able to carry out my wish to raise a number of seedlings to see what results would follow. A chance seedling which has appeared has, however, gone back to the normal form of *C. carpatica*, not only in form, but also in the colouring, which is much deeper than the china-blue of *C. c. pelviformis*. I have here another variety of *C. carpatica* with saucer-shaped flowers. It was sent to me from Lanarkshire. The flowers of this variety are deep blue, such as we generally associate with the typical *C. carpatica*, and the plant is of a decidedly prostrate and not erect habit. The flowers are, perhaps, hardly so flat as those of the usual pelviform variety, but are much more so than those of the typical or other forms.—S. A.

Veratrum nigrum.—Attention is directed by "S. A." to this striking plant as a flowering subject for the present month. As justly observed, the value of the plant does not rest in the brilliancy of its flowers, nor is it one of those every-day plants that can be strongly recommended for cutting, a point which appears to carry great weight in the minds of not a few at the present time. Happily for the garden, there are some things that are more or less ill-suited to cutting, and this handsome plant is one of the number. "S. A." also refers to the continued attractions of the plant, when from its early days the handsome leaves can scarcely be seen without being admired. The reference to its non-flowering over a period of years would appear to suggest either an unsuitable spot or a soil too light and possibly too dry. Any such plants should now receive very heavy soakings of water if such be at all possible. Bold in aspect and possibly a trifle gross naturally, a rich and deep bed of fairly strong soil and abundance of moisture from the time growth begins are among the best aids to quickly form it into a flowering plant. Disturbance of the root should only be countenanced of necessity, as it causes a check that leaves its mark for a full season at least. Some years ago a group of this, planted in a semi-wild spot where the root fibres wandered into a trickling streamlet on its way to an artificial bog bed, attained fully 5 feet high, and after the third year flowered regularly for the most part. There is in the flowers a peculiar odour which is by no means disagreeable.

Market gardens.—Judgment was recently given in the House of Lords in an appeal which raised the question whether market and nursery

gardens, upon which are greenhouses and other structures used for productive purposes, can claim the benefit of the Agricultural Rating Act of 1896. At Worthing the overseers returned a market garden and the structures upon it as agricultural land, but the surveyor of taxes treated them as buildings. The question was carried by way of appeal through the Courts, and the Lords now affirmed the judgment of the Court of Appeal that a market garden with its buildings is not agricultural land within the meaning of the Act.

The weather in West Herts.—Throughout the past week the days' temperatures have again been very high, but several of the nights proved cold for the time of year. On the 15th the shade temperature rose to 87°, which is the highest reading in shade as yet recorded here this year. On the other hand, on two nights the thermometer exposed on the lawn fell to within 8° of the freezing-point. The ground still remains very warm, the readings at 2 feet deep being 7°, and at 1 foot deep as much as 8° warmer than their respective averages for August. Half an inch of rain fell during a thunderstorm which took place on the afternoon of the 15th, and during the height of this storm rain was falling for three minutes at the mean rate of 2 inches an hour. No measurable quantity of rain-water has, however, as yet come through either of the percolation gauges. The winds were again light, and came mostly from some point of the compass between north and east. During the four days ending the 13th the sun shone brightly on an average for nearly twelve hours a day.—E. M., *Berkhamsted*.

Open space for Hammersmith.—In the Consistory Court, Hammersmith, Dr. Tristram, Chancellor of the Diocese of London, granted a faculty authorising the improvement and use as an open space of the portion of the old churchyard of St. Paul's, Hammersmith, which has been closed since 1854.

The Dutchman's Pipe.—I enclose a leaf of *Aristolochia Siphio*, or Dutchman's Pipe, which seems unusually large. Several other leaves on the same plant are of much the same size. The plant is growing against a house wall.—J. H. W. THOMAS, *Belmont, Carlrow*.

* * * The leaf sent measured 13½ inches across its widest part, the length from the stalk to the tip being 1 foot.—ED.

Caterpillars on Dahlias.—There is no royal road by which you can destroy all kinds of caterpillars except by hand-picking. From your letter I should imagine that your garden was infested by a great variety of different sorts, but, unless I know the kind of caterpillars, it is impossible to tell you the best means of destroying them now or of preventing an attack next year. I can only suggest that you should spray or syringe your plants with solution of paraffin emulsion, or a mixture of Paris green, lime, and water might be used in the same way with plants that were not intended for food in any way, as the Paris green is a rank poison, but if your garden is a large one this is no light task. If you will send up a few specimens of the different kinds, giving the names of the plants on which they feed, I might be able to suggest something more practical.—G. S. S.

Names of fruit.—J. W. Shaw.—Your Apple is French Crab. The fruit looks as if it had been scorched, no doubt owing to the trying weather we have had of late. We should imagine the trees are dry at the roots.—C. West.—1, Devonshire Quarrenden; 2, Early Julien.—N. Kaznakoff.—Quite impossible to name fruit from leaves only.

Names of plants.—Subscriber.—Your Rose is Fellenberg.—J. R. P.—1 (if a small tree), *Acer Negundo*; 2, must be sent when in flower and with fuller material; 3, *Sedum Sieboldi*; 4, *Aloe fruticosa*.—G. B. B.—1, *Bet Balm* (*Monarda didyma*); 2, *Solidago aurea* (Golden Rod); 3, *Echinops ruthenicus*; 4, *Anemone japonica*; 5, *Stenactis speciosa*.—F. Hampson.—1, *Sedum Lydium*; 2, the Thorn Apple (*Datura Stramonium*).—*Quercus*.—1, *Rudbeckia maxima*; 2, *Aster Shorti*; 3, *Hypericum* sp.; 4, *Statis latifolia*; 5, *Ophiopogon Jaburan variegatum*; 6, send better specimen.—Watkins and Simpson.—1, probably a seedling of *Chrysanthemum frutescens*; 2, *Pellionia Daveana*.—T. Nowell.—*Burlingtonia candida*.

gonia is a great favourite in the north in gardens where a bright display is wanted late in autumn. Last year in October at Halyburton House, near Dundee, I saw more Begonias in one garden than I have ever seen before. They were all seedlings, home-raised I believe, and nothing that I have ever seen in the London parks or elsewhere surpassed the gorgeous display of colour which they produced. Geraniums and Verbenas never approached the Begonia for mere bedding purposes, the colours are so numerous and varied, ranging from the softest whites, yellows, and pinks to the most intense scarlet-purple and crimson, and yet none of the shades are exactly alike. I have known the plant to generally flower best after midsummer, and mulching the beds in hot weather and dry soils is indispensable. Coolness and moisture are what the Begonia loves, but not too much shade. The tubers should be kept in sand in a cool shed free from frost during winter, and either planted out in the bed in April and well mulched or brought on in a cool frame and put out later. The Begonia is becoming a popular window plant, and is exceedingly easy to grow in such positions. I lately saw it in cottage windows in a smoky town in fine condition.—S.

HARDY FLOWERS AT SUMMERVILLE, DUMFRIES.

THERE is at Summerville, Dumfries, N.B., a nice collection of hardy flowers. A recent visit gave a considerable amount of pleasure, as not only were there a good many plants in bloom, but much could be seen of the comparative behaviour of those grown under other conditions than in one's own garden. There are a number of good alpine, although there are no elaborate rockeries, but only several raised beds divided into pockets. The welfare of the plants is the first consideration, and this is more frequently secured under such conditions than in ordinary rock gardens. The number of plants was too large to admit of much detail, but one may note some as either in flower or as showing some unusually good features. *Onosma tauricum* (the Golden Drop) was doing well, and a pretty little *Statice* named *S. minuta* was neat and pleasing. *Oxytropis Halleri* was also observed, with *Anthemis Aizoon*, the *Edelweiss*, and *Tunica Saxifraga*, pretty with its mass of lightly arranged little flowers. There is at Summerville an unusually fine plant of the quiet-coloured, yet pretty *Teucrium pyrenaicum*, a neat alpine, not easily kept everywhere and now little seen. *Dianthus Napoleon III.* was unusually good, and plants in bloom were making a quantity of "grass" which would cause many to envy Mr. Davidson his success with this brilliant mule Pink. Another flower doing unusually well was *Mazus Pumilio*, whose little flowers looked well above their dwarf carpet of leaves. *Gentiana Pneumonanthe* was just coming into bloom, and the somewhat difficult-to-grow *Polygonum sphaerostachyum* looked flourishing with its spikes of bright red flowers. *Erodium Reichardi* was also good, and one saw nice plants of *Aster Stracheyi* and the supposed hybrid *Bryanthus erectus*, the latter an exceptionally fine example. At Summerville the encrusted *Saxifraga* and the alpine *Dianthus* are always remarkably healthy. The border flowers were fine, although the effects of the drought were beginning to be apparent in such moisture-loving subjects as *Spiraea palmata alba*. There were good plants of the effective *Veratrum album* and *V. nigrum*, while the large-leaved *Groundsel* (*Senecio macrophylla*) was very showy. The favourite *Spiraea bullata* was good, and *Heuchera* brizoides pleased one much with its sprays of graceful flowers. *Coreopsis verticillata* is always elegant, its light looking foliage associating well with its bright flowers. At Summerville there is also the fine variety of *C. articulata* named *monstrosa*. Mr. Wolley-Dod's variety of *Heliopsis laevis* was also very good, while *Eryngium alpinum*, a good plant in the district, was very attractive with its wonderfully carved and col-

oured heads of blue. *Spiraea gigantea* was not so fine as I once saw it in Rev. C. Wolley-Dod's garden at Edge, but still it was an effective subject at the back of a border. Not showy, yet pleasing in its own way, was *Asclepias incarnata*, another plant for the back of the border. Always good in this garden is *Maries' Balloon Flower* (*Platycodon grandiflorum Mariesi*). The stock is unusually select, and one capital pure white form was specially noted. Some *Liatrises* were fine, and although out of bloom, one observed a good plant of the old double Siberian Larkspur which has been in the border for about eight years. An effective *Rhubarb* (*Rheum sanguineum*) looked very handsome in a broad border. *Helianthus orgyalis*, which, however, seldom flowers at Summerville, is one of the most elegant plants of the season. It comes into bloom so late in this district, that it may only be counted upon as a plant of fine effect because of its grace and lightness, combined with tallness of stature.

My time was rather limited to take a note of the many good border flowers, but those named will give an idea of the variety cultivated in Mr. Davidson's garden. S. ARNOTT.

INCARVILLEAS.

I STATED in the note that accompanied the plate of *I. grandiflora* (page 22) that the plant figured might be only a form of *I. compacta*. In the Kew herbarium there are specimens labelled *I. compacta* var. *longipedunculata* which agree both in leaf and flower characters with *I. grandiflora*. The type has leaves scarcely 3 inches long with pinnae a quarter of an inch long, whilst the flowers are borne singly on very short stems, the corolla being 2 inches across and rose-purple in colour. There are forms with larger leaves and longer flower-stalks up to the dimensions of *I. grandiflora* as represented in THE GARDEN plate. Had I seen the plate in *Gartenflora* referred to by Mr. Gumbleton (p. 59), I should have been of the same opinion as Herr Max Leichtlin, viz., that there was some doubt as to the correctness of that figure. It certainly has no resemblance to *I. compacta* as represented at Kew. I have not, however, seen living examples of the last-named, which, according to the information given by Herr Max Leichtlin, has produced a flower-stem 30 inches high. Probably these variations in size are due to the conditions under which the plant grows. For garden purposes we may, I suppose, stick to the names *grandiflora* and *Delavayi* for the two plants represented in THE GARDEN plates. Surely Mr. Gumbleton recognises the difference in foliage and in the shape and size of the calyx in these two as drawn by Mr. Moon?

There are, according to French botanists, several other large-flowered species of *Incarvillea* worth attention. They are: *I. lutea*, leaves 10 inches long, flower-stems 30 inches high, flowers about 2 inches across, yellow; *I. principis*, general dimensions as in *I. lutea*, with flowers in racemes, coloured bright red; *I. Beresowski*, with tuberous root-stock, leaves pinnate, pinnae an inch long, flower-stem 9 inches, bearing a racemose cluster of about nine flowers. It looks like a form of *I. Delavayi*. *I. Bonvaloti* has the appearance of a small form of *I. compacta*, the leaves being scarcely 2 inches long, whilst the flowers are about 2 inches. The flowers in most of the species are borne sometimes singly, sometimes several on a stem. These are all natives of Thibet and Western China. W. W.

The old *Crimson Clove*.—I was as pleased as surprised recently to see in an amateur's garden quite close to Norwich several handsome beds of the fragrant old *Crimson Clove*. There were literally hundreds of full-sized, richly coloured blooms. I thought how many gardeners in private places where the air is pure and quite unimpregnated with smoke would only be too glad could they but induce this old favourite to grow and flower so well. As is well known, this *Carnation* in many soils goes off wholesale either

with spot, fungus, or dry rot. So much so is this the case, that many have substituted *Uriah Pike*, which, though a bright variety of strong constitution, is not, I think, equal to the *Crimson Clove*. I know some gardeners entertain the idea that to do the latter justice a rather strong loamy soil is necessary, but in the neighbourhood of Yarmouth both it and the white variety, *Gloire de Nancy*, grow and flower with great freedom in a very sandy soil, disease seldom showing itself. Many amateurs and cottagers, though passionately fond of their *Carnations*, do not seem to know their wants. One recently told me that he propagated his stock from cuttings taken off and inserted in the garden, but that a large percentage of them collapsed. He seemed gratified when I explained to him the layering system. Many of the choice, yet none too robust *Carnations* throw but few flowers and make only a limited quantity of grass the first season. The best way, in my opinion, is to layer the whole of the growths, when rooted transplanting a few, but leaving the rest untouched for flowering next season; a good display of bloom will then be secured. These shy bloomers ought also to be planted in twos or threes. Three of the most vigorous free-flowering *Carnations* in existence, and which ought to be included in every collection, are *Pride of the Garden*, bright rose; *Celia*, deep pink; and *Burn Pink*.—N. N.

SINGLE HOLLYHOCKS.

"A. D.'s" interesting notes on these good, but much neglected old-fashioned flowers remind me of a capital strain of single varieties I recently saw in a roadside garden. I could not help thinking what a pity it was they did not occupy a position in which their beauty could have been longer preserved, as close by a dusty road near a busy town is about the very worst place to plant *Hollyhocks*. The single strains are, I think, the more showy, but, as "A. D." truly remarks, the lowermost blooms, or those which expand first, often collapse ere those higher up the spike are open. I think this evil may to a very great extent be prevented by good culture, as old growers who used to exhibit preserved the long, gorgeous spikes intact. A deep, rich root-run and general all-round good culture produce corresponding stout stems and flowers, the latter having sufficient substance to enable them to withstand wind and wet, so that the entire spike is in good condition at once. It is certainly strange that *Hollyhocks* should not occupy a more prominent place in private gardens generally where labour is sufficiently plentiful to afford them every attention. Both the singles and doubles—for the latter are very attractive also—are surpassed by very few subjects for mixed border adornment or for massing in separate beds. What can possibly be more showy than a good-sized bed of choice *Hollyhocks*, thoroughly well grown, properly staked, and in full beauty, occupying a site on a well-kept grass lawn? There is something so stately as well as handsome, that even a novice is sure to admire them. But *Hollyhocks* want growing. Probably nothing will take so much rich food either in the form of soil or liquid; indeed, I knew of one old grower who gave to his *Hollyhocks* a ladder that he would have been frightened to give to his Vines. The ground, if the finest spikes of bloom are desired, should be prepared in good time, say several months previous to planting. This would mean January or early in February, as I am in favour of March or April planting, according to the weather—I mean transferring them from the nursery beds where they as seedlings were pricked out the previous summer. I know some maintain that large and good enough plants for flowering the same season can be produced by sowing in warmth in spring, but my experience is that in the majority of cases such plants only carry indifferent spikes the first year, and are thereby greatly stunted for all time coming. I do not think there is a better way than sowing the seed in a cold frame in a semi-shaded position about the first or second week in May.

A bed of rather fine soil with merely a glass light resting on four flower-pots placed over it will answer as well, protection from heavy rains and parching winds being the main thing. Full exposure when able to take care of themselves and liberal supplies of moisture must be accorded. When sufficiently large, transplant to a well enriched piece of ground where protection can be given should the winter prove severe, putting them out very carefully the following spring. By this means grand plants and towering bloom-spikes will reward the cultivator. Frequently mulching is neglected, and the plants, which are very thirsty subjects, are insufficiently watered. It is unwise to plant Hollyhocks in exposed positions, as high winds play havoc even if firmly staked. Rustic stakes answer the purpose, but the plants are set off to the best advantage when secured to strong deal stakes painted green. Since the dreaded disease made such inroads the majority of growers depend on seedlings.

NORFOLK.

WHITE LILY DISEASE.

AN experiment made at Oakwood goes some way to prove that the disease which is so destructive to the old white Lily may be to a large extent conquered by liberal culture. In this locality it was this season difficult to find a plant that was free from disease, and in most instances the foliage was completely withered, although in some places there was a fair show of bloom, as the disease was late this year in declaring itself. The appearance of such long stems, however, clothed with rusty leaves, crowned with a few flowers, is by no means ornamental, and I would much rather cultivate some other kind, such as *pardalinum* or *tigrinum*, which can be relied on to remain in good condition through the flowering period. At Oakwood every plant was when in bloom remarkably healthy, being well flowered and furnished with fresh foliage to the ground, large clumps having the fine ornamental appearance which in former days characterised this Lily in gardens generally. This healthy appearance is attributed to judicious feeding in various stages of growth. The plants were top-dressed with manure when they came into free growth, and later on they were again dressed with guano, which was well washed in. It would be well if those who are desirous of having this grand old Lily in good condition would experiment in the same way. It stands to reason that a well-nourished plant will resist disease better than one that has been starved into a state of weakness.

J. C. B.

Varieties of *Lilium chalcedonicum*.—Though appealed to on p. 132, it is, I am afraid, impossible for me to throw much light on the forms of *L. chalcedonicum*, concerning which a certain amount of confusion prevails. The forms I have met with are just as your correspondent describes, while the variety *Heldreichi* appears to be the same as *majus*. The yellow-flowered form suggested in the "Dictionary of Gardening," I am afraid, does not exist, and I have always thought that the idea of it originated in confusing *L. chalcedonicum* and *L. pyrenaicum*. Such was also the opinion of M. J. d'Hoop, of Ghent, who some years ago compiled a most exhaustive and valuable list of Lilies. This was published in *THE GARDEN*, February 25, 1885.—H. P.

***Lilium Batemannæ*.**—This Japanese Lily has been particularly attractive this season, as it has not only flowered freely, but the unspotted apricot tint of its blossoms has been even more brilliant than usual, probably owing to the almost tropical weather experienced during its flowering period, which, however, had the effect of quickly shrivelling up the blossoms after expansion. Though it flowers, as a rule, in a satisfactory manner, yet the same cannot be said of the foliage, as many of the leaves frequently turn yellow before the blossoms expand. This is not invariably the case, but at the same time it is quite an exception to find the foliage retained uninjured

till the flowering period. *L. Batemannæ* succeeds best in a sandy loam, and in heavy soils or in those of a peaty nature it is seldom satisfactory. It is also not at all a good Lily for growing in pots, the foliage then suffering even more than in the open ground. Apart from its beauty, it is also of interest as being the last of the upright-flowered Lilies to bloom. *L. Batemannæ* is usually sent here in considerable numbers from Japan, the Dutch growers having apparently not taken it in hand in quantity. The bulbs travel well in their clay covering and can be depended upon to flower in a satisfactory manner the first season, many of the largest pushing up two or three stems.—T.

FLOWER GARDEN NOTES.

BAMBOOS.—Although there may be some doubt as to the value of Bamboos for a prolonged spell of house decoration, they are certainly valuable for occasional work in this direction and also (I refer to pot plants) to assist in forming high and attractive groups for out of doors during the summer months. An intimation that a considerable amount of church decoration would be required this season led me to purchase early in the spring a batch of nice clumps of *B. Metake*. They were well delivered, that is they were very carefully lifted, matted, and had received a thorough soaking, and on arrival were severally potted into 14-inch pots and placed at the back of some sheds, where, given a spell of hot weather, they were not likely to dry out quickly. Since and including Easter these plants have been used in the church four times besides playing their part in occasional house decoration and forming out-door groups in company with Fuchsias, Heliotropes, zonal Pelargoniums and other things. They are now consigned to the old quarters under a north wall and are in the best of health. The leaf-dropping is over and the young growths are clean and vigorous. In all cases where a considerable amount of decoration is required and there is not sufficient glass to allow of the storing of large Palms, these Bamboos will be found very useful. I said above that they were effective when grouped with large Fuchsias or zonal Pelargoniums, and both the latter have been exceptionally good this year, fan- and balloon-trained specimens and naturally grown plants all flowering remarkably well, although a considerable amount of attention in the way of watering and feeding has been necessary to keep them up to the mark. When large plants are once secured, they can be kept going for several years by liberal feeding, and it is a good plan as soon as they start in the spring to turn them out of the pots, break off say a couple of inches from the base of the plants, and the same from the surface, replacing in each case by a compost of cow manure and good loam in the proportion of three to one. This is a wonderful help in dry seasons, because when thoroughly soaked such a compost is very retentive of moisture. Capital plants to mix with Bamboos, Fuchsias and Pelargoniums for outdoor grouping are *Campanula pyramidalis alba* and *Francoa ramosa*. I generally retain a batch of the last-named plant for this special purpose, and these throwing as they do eight, nine and ten spikes, make individually a very fine display. The remarks above as to the effectiveness of Fuchsias and Pelargoniums from a pot plant standpoint are equally applicable to open beds; indeed, the much-maligned Pelargonium is at the present moment decidedly the brightest of garden flowers and has been so for some time, and this, too, at a minimum of trouble, for they have only received one soaking and that directly after planting. The plants were well rooted stuff in 4-inch pots and the beds were well prepared for their reception. It has always been my impression that if a little more care and discrimination had been used in the planting of Pelargoniums we should have heard little or nothing of the outcry raised against them. They were used, as many of us remember, in dense, flat masses with absolutely nothing to relieve them, or if anything else was employed, it had

often a tendency to accentuate rather than relieve the stiffness, as, for instance, Golden Privet, variegated Abutilons, or small conifers of severely symmetrical appearance. Instead of such things I would advocate occasional plants of *Gypsophila*, which, even when seedling, is light and graceful; *Statice*, lightly staked to prevent the big heads from falling about; nicely-grown plants of *Eucalyptus citriodora*, or for larger beds, *Tamarix gallica* or *Hydrangea paniculata*. Associate with these, as the contrast may need, such *Geraniums* as *Jacoby*, *Raspail*, *King of Bedders*, *Surprise*, *Olive Carr*, *Amaranth*, or some of the best of the Ivy-leaved section, and I do not think there will be anything to complain of as to a bright display or an effective combination. E. BURRELL.

Claremont.

Lifting *Lilium candidum*.—I lifted a large number of my stock of this fine Lily last season; indeed, I am gradually drifting to the opinion that it is not lifted sufficiently often in the majority of gardens. I picked out last year a lot of small trashy bulbs that certainly did not look strong enough to bloom and planted them cut very thickly, thinking that they may at least live and in time make flowering bulbs. Many of these have pushed up fine flowering stems, and others have made nice bulbs. This they would not have done if crowded in clumps, but being able to reach new soil all the way round the roots have become more active and fed the new bulbs well. A good baking in the full sun is undoubtedly a help towards keeping disease in check, but is not a cure for it, unfortunately.—H. R.

Carnation Leopold de Rothschild.—Though scarcely up to the standard of merit laid down by many fanciers and growers of the Carnation, this is not only of vigorous growth, but free flowering as well. It would appear also to have some leaning towards the Tree or perpetual section, notwithstanding that it is at its best at this time. The large and showy flowers create a fine display. Mr. G. Reynolds brought a large basket of well-flowered plants to the Drill Hall on Tuesday from Gunnersbury Park. The colour is a sort of rose-magenta, the petals large and the pod well formed. Far too many of our finest Carnations are lacking in vigour if possessing beautifully refined flowers, while here we appear to have a plant which, if lacking refinement, is neither wanting in freedom nor vigour, and therefore would be welcomed by not a few gardeners whose chief object is to maintain a long succession of flowers in the open beds.

NOTES AND QUESTIONS.—FLOWER.

***Monarda didyma*.**—The pretty bright red flower-heads of this old-fashioned plant are now in good condition, and there are many among hardy plants that are thought a lot more of but are not more worth a place in the garden. The leaves when bruised emit a pleasant aromatic fragrance, and it is from this circumstance that its name of Bergamot has been given. It is of the easiest possible culture, thriving in almost any description of soil or situation.

Yellow ground and fancy Carnations.—Referring to the letter from "R. D." in your issue of the 12th inst., I am glad to be able to assure him that steps will certainly be taken this year by the committee of the National Carnation and Picotee Society in the direction suggested by his letter. The inaction of the society in the past concerning this matter has been the result of a well-considered policy, not of indifference or supineness.—MARTIN R. SMITH, Warren House, Hayes, Kent.

***Tulipa Lownei*.**—This small Syrian species, described by Baker in 1874, was only lately introduced in a living state. The plant is 8 inches high and has leaves of a yellow-green, which is rare among Tulips, the leaves of which are mostly glaucous. The flowers are of a peculiar shade, which arrests attention. The petals are of a light and brilliant lilac colour, and marked at the base with a broad bright yellow stain. I know no other Tulip so coloured, and though not among the most beautiful, it certainly deserves attention. This year under a frame it flowered in April.—M. MICHELL, in *Revue Horticole*.

KITCHEN GARDEN.

ASPARAGUS—RAISING, GROWING, AND FORCING.*

THE chief districts of England famous for growing Asparagus are Cambridgeshire, Worcestershire (especially the Evesham district), Essex (about Colchester), and in the Thames valley near London. The best home-grown outdoor Asparagus that is sent to Covent Garden Market is produced in these districts. In Scotland, the south-western parts, comprising the counties of Ayr, Wigton, and Kirkcudbright, are specially favourable. The soil in many places is a rich sandy loam, and the maritime situation, together with the influence of the moisture-laden atmosphere from the Gulf Stream, has a very beneficial effect. Its cultivation is, however, almost entirely confined to private gardens. On the cultivation of Asparagus in Scotland, it may be here interesting to quote from a paper on the supply of vegetables to the Edinburgh and Glasgow markets, read before the Scottish Horticultural Association by Mr. J. Scarlett, of Inveresk. He says, "There is practically no Asparagus grown in Scotland for market. English, French, and Spanish have ousted home-grown to such an extent, that the one or two growers who used to bring anything like a quantity have discontinued its cultivation. This is due probably more to the lateness of the home crop, compared with that of other countries, than to any unsuitableness of soil or climate."

SOIL.

Rich sandy soil of good depth is naturally the best adapted for Asparagus, and in such its cultivation is an easy matter. But in these days, whatever the nature of the soil of a garden may be, the cultivation of Asparagus is looked upon as an absolute necessity, and the fact is often lost sight of that if the soil be of a clayey nature and shallow, the produce under such conditions cannot possibly bear comparison with that from ground naturally suitable for the growth of this plant. With labour and materials at command, heavy, clayey soil may be in time brought into a light, porous condition by the addition of sand of the best kind procurable—sea, river, or grit, sandy deposits from drains, road scrapings, burned earth, and lime, brick, and rubble from old buildings, all these are excellent for rendering soil permanently porous. Whatever the soil may be, leaf-mould, peat, light fibrous loam, old hotbed material, seaweed, and farmyard manure (especially that from cows), I have found to be the best fertilisers. The last-named is practically indispensable, for the soil can scarcely be too highly manured, as good quality depends on quickness of growth, which is assisted by richness of soil. Asparagus is a deep-rooting plant. Frequently after doing away with old beds I have found the soil permeated with roots to the depth of 30 inches; consequently in preparing the soil for planting it should be made 30 inches deep by trenching, adding, and mixing in the materials already named, from the bottom to the surface as the trenching proceeds, in quantities as required according to the nature of the soil. The advantages of deep trenching and increased depth of rooting medium are that the roots descend so that they do not suffer so much from want of moisture in dry seasons, and they also assist the free percolation of water in wet seasons. Although Asparagus is a seaside plant, it will not thrive in stagnant ground, and if the subsoil is

of a clayey, impervious nature, insufficiently drained, this defect must be remedied by drains, put in before doing the trenching, or a layer of a few inches of old brick rubble or cinders will form an effective drainage if placed at the bottom at the time of trenching. In considering the situation of the ground, the best is that with a slight fall to the south, well sheltered on the side whence come the prevailing winds. For climate, the southern parts of the country are the most favoured.

Asparagus, like other things, to be in the fashion must be large; size, which does not sacrifice quality, is due to soil, cultivation, and situation, and not to any special varieties, as there is believed to be but one. Red Topped or Dutch, and Green Topped, and the names of places famous for its cultivation have been given to supposed varieties of it, but variations in size and in colour are, in my opinion, due entirely to the conditions under which it is grown. The month of March, when the surface of the ground is dry, is the best time to sow the seed, thinly, in drills an inch deep, the drills a foot apart, at the rate of half an ounce to 15 yards run of drill. The trenching of the ground should be completed in autumn, six months before the time of planting, so that the ground has time to settle, and in March, when it is in a suitable condition to work on, the surface should be forked over and made even, after which it will become friable and settled by planting time. Asparagus is a plant that is amenable to transplanting, provided it is done at the right time and reasonable precautions taken not to let the roots become dry. When the shoots have grown to a length of 3 inches or 4 inches is the best time to transplant, but the young shoots had better be longer than this than transplant before the vital powers have become active. Some growers continue the old beds, and some have introduced the plot system, adopting it from the French; but, whatever the system, the rows should run in the direction of north and south. I have tried various modes of

PLANTING.

The one I have found the best and most expeditious is to cut out a trench with a spade by the side of a line, 6 inches deep and slanting, in the same way as for laying Box. The roots should then be spread out quickly and carefully covered with soil, leaving the crown of each plant about 2 inches beneath the surface. Care should be taken to separate the plants so as not to have two crowns where there should be but one. After planting, a good watering should be given to settle the soil, and further waterings must be given as often as required, according to the weather, until the plants are well established. The distance apart of the plants depends on the system followed. Both have their peculiar advantages. The bed system is the one generally employed, and it is the best where the soil is shallow and the subsoil is of a cold, clayey nature; but where the soil is light and rests on a dry subsoil the plot system is the best, particularly in dry seasons. A width of 5 feet for a bed, and 2½-feet alley between beds, is very suitable for the growth of the plants and for carrying out the necessary work in the different seasons. Three rows are planted in each bed, one in the centre and one on either side, leaving 18 inches between them. The distance between the plants in the rows should be 2½ feet. With the plot system the distances between the rows should be 4 feet, and 18 inches between the plants in the rows. These distances by some may be considered unnecessarily wide, but they are not so, for if good results are to be obtained the plants must have room for the tops to fully develop without

crowding. The French give even more space than this; they allow 4 feet from row to row and 3 feet in the rows. One-year-old plants are much the best; if older, they do not transplant so well. Some recommend the sowing of seeds in the permanent beds or plot; by so doing, the ground, according to my experience, is occupied by it one year unnecessarily, as one-year-old plants do equally well. During the season of growth, besides watering, attention to weeding is all that is required. In the autumn or early winter, after the tops are dead and cleared off, a dressing of decayed manure should be spread on the beds, a stake driven in the corner of each bed, the sides marked off, and about 3 inches of soil from the alleys placed over the manure; or, in the case of the plot, the manure is dug in between the rows. About the same time in each year afterwards a dressing of manure or sea-weed is required to be dug in and the surface left rough. In the spring, before the shoots begin to push, the surface should be made smooth with a rake, and this is the best time to apply a dressing of salt, not only for its saline qualities as a manure, but it also kills insects and weeds. Of artificial manures, I have found nitrate of soda to produce a marked effect when applied early in the spring to old beds past their best. Where the soil is not of so calcareous a nature as desired, a dressing of fresh lime applied early in the spring will supply the defect. On the

CUTTING OF THE CROP

there is but one opinion of the time to begin on a new plantation, and that is not until the third season of growth; and my advice is to cut but very sparingly, only taking about two early cuttings of the strongest shoots. After the third year the plants may be considered in bearing order, and, with liberal and careful management, will continue so for a dozen years or more. Of how to cut, different rules have been advocated by different growers; some cut all that rises above ground until the middle or end of June, others only take the strongest shoots and leave the others to grow up, and no doubt this latter is the best rule, only then more ground must be devoted to Asparagus, a matter which all growers cannot afford. Personally, I adopt a medium rule, by cutting all that rises till the middle of the season, i.e., about the middle of May, and after that only the strongest shoots till June 15, and if by any chance emergency demands a cutting later, it is very reluctantly supplied. After the cutting season, growth must have time to develop and ripen before the autumn. On the vigour of the growth to a large extent depends not only the size of the shoots the following year, but even the life of the plants. Many beds are ruined through over-cutting. I have even heard a gardener say that to have good Asparagus, beds should be cut from only in alternate seasons. As so much depends on the maturing of strong growths, care must be taken to protect them against wind. A few Pea stakes stuck into the ground amongst them for the tops to lean against form a good wind guard. The taste in England hitherto has been for green Asparagus, and to have it in this condition it is allowed to grow 3 inches or 4 inches above the surface of the ground, and then cut 2 inches or 3 inches below it. The French prefer it blanched, and their method seems to be gaining favour in England. To have it in the French style a greater depth of soil is required over the roots, and the shoots must be cut when they are seen to be heaving up the surface of the soil. The plot system is the best for this; the soil may be drawn over the rows on both sides, in the way in which Potatoes are earthed up, and the

* Paper read by Mr. Geo. Norman, Hatfield, before the Royal Horticultural Society, April 18.

time to do this is just before the shoots begin to push. At Hatfield I usually begin to cut Asparagus outdoors about April 15, a few days earlier or later according to the season.

FORCING ASPARAGUS.

There are two systems in vogue in this country: one is to grow the roots outdoors for three years or more, and then to lift them and

spring months. In fact it is looked upon as one of the gardener's necessary duties to provide it. I have forced it in many different structures and positions—in garden frames, with the usual hotbed heat; in houses over heated chambers, while Strawberries over them have occupied their usual position near the glass; and under stages with plants upon

these temperatures cutting begins in from three to four weeks from the start. The quality from the beginning of cutting onward for a month is about the same, after which time it rapidly declines. To keep up a supply from December till the outdoor cutting begins, batches of roots must be lifted monthly, beginning early in November. When putting the roots into the forcing quarters, about 4 inches of light soil are laid over the chamber; on this the roots are placed closely together, and about 4 inches of light sifted soil are spread over them. Liberal supplies of water must be given during forcing. The production of very early Asparagus does not so much lie in the forcing as in strong, healthy, well-grown roots, sown and planted out specially for the purpose, when one year old, on a plot of ground prepared in the same way as recommended for the permanent beds, or plot, in rows 2 feet apart, and the plants 1 foot distant in the rows. After being planted the treatment is the same as for the permanent beds. In the spring of the second season after planting a dressing of salt is given; afterwards weeds are removed that have escaped the effects of the salt, but no cutting whatever must be allowed. During the second season after planting a sound watering occasionally during dry weather does a great deal of good, but, unfortunately, the water supply at Hatfield will not allow of this. When doing away with old beds and using up the roots for forcing, a few of the shoots produced may be stronger than those from the three-year-old plants, but they are not nearly so numerous, and, taken as a whole, they are not so satisfactory. The brick bed system has now been in use for many years, and the fact that it is so seldom met with is, I think, a proof that it has not many or great advantages. At the outset it is expensive to construct. One of its few advantages is that the shoots are thicker than from lifted roots, and they are in season for two months before the outdoor. The beds are usually about 6 feet wide and 4 feet deep, to allow a foot for drainage and 3 feet for soil. The alleys are 18 inches between, and the brickwork is $4\frac{1}{2}$ inches pigeon-holed, with piers for strengthening it. Before forcing begins the beds are covered with several inches of leaf-mould and covered over with shutters. The alleys are generally filled with leaves for heating the beds. Mr. Wythes, at Syon House, forces Asparagus on this system, as also does Mr. Owen Thomas, the Queen's gardener at Windsor, only that he has hot-water pipes to heat the beds instead of leaves. Asparagus is considered by some the finest vegetable grown. It is not only pleasant to the palate and can be used in so many different ways in cooking, but it can also with ease, by forcing and outdoor cultivation, be had in season for seven months out of the twelve—from December to June. The most usual way to send it up to table is as a vegetable pure and simple, and for this purpose only the largest shoots are used, the small ones finding their way into the soup tureen and into many fancy dishes. Every shoot that rises to the surface of the ground can be utilised in some way.

My remarks are, of course, more generally applicable to private growers than to market gardeners; and whatever disadvantages some private gardens may have in producing it, they ought certainly to be surmounted, for to have Asparagus at its best it should be cooked and eaten as soon as possible after being cut, as it very quickly deteriorates in flavour when once cut. For market in this country it can only be grown at a profit under the most favourable conditions of position, soil, and climate. Where growers are so happily situated and



Market bunch of Asparagus. From a photograph sent by Mrs. Wakeman-Newport, Sandbourne, Bevdley.

force them under glass. The other method is to plant the roots permanently in brick-built beds, pigeon-holed. The former plan is the one most generally followed. Lifted roots are quickly excited into growth with very gentle forcing. This renders Asparagus very suitable for forcing, and it is most valuable as a choice vegetable during the winter and early

spring months. These are but makeshifts; nevertheless they have answered the purpose, and show how easy Asparagus is to force. The best structures in which to force it are pits or low houses, with hotbed material or pipes for bottom-heat and pipes for top-heat. Suitable temperatures are 65° to 70° Fahrenheit for bottom-heat, and 55° to 60° above. In

have experience in growing it, I believe they find it a paying crop; but from time to time many have begun to grow it in places where soil and situation have not been suitable, and have been obliged to give it up. It is very largely imported into this country from the south of France, Italy, and Spain. In the early months of the year the largest and best comes from France. Prices vary according to size and demand, some giant shoots fetching as much in Covent Garden Market as from 10s. and 12s. to 15s. per 100. Many thousands of bundles are brought over daily, and every year the communication from the south of France is quicker, and brings it over in better condition. The best home-grown outdoor Asparagus is sold in Covent Garden at from 1s. to 4s. per 100.

Peas.—The hot, dry weather that we have been having of late in this district has been all against Peas, which are simply eaten up with thrips. I commenced gathering the second week in June, the variety being Carter's Lightning. I have grown it along with other sorts since it was first sent out, but nothing can equal it for earliness. Chelsea Gem came in ten days later. English Wonder I have grown for the first time, but it will have to go. Dickson's Fertility is the best midseason variety, height 2½ feet, a tremendous cropper, with nine and ten large deep green peas in each pod. It has resisted the drought the best of any Pea in the garden. Another good dry season Pea is Daisy. Dr. McLean has likewise done well. Autocrat, Duke of Albany, The Duchess, Dickson's First and Best, William I., and Ne Plus Ultra have been very poor.—THOS. COCKERILL, *Wirksworth, Derbyshire.*

Potato Sutton's Seedling.—I am inclined to think that newer varieties are pushing this grand Potato out of cultivation, although I think that anyone who has thoroughly proved its merits will not readily discard it. For years after its introduction it secured more first prizes, I should say, than any other variety coming into use at the same season, but perhaps for this particular purpose Windsor Castle has superseded it. I am, however, speaking of it as an all-round useful Potato, and maintain that, given good treatment, it will for cropping, flavour, and symmetry combined take a lot of beating. To those who prefer a particularly mealy, nutty-flavoured Potato I would say grow Sutton's Seedling. My land was on the light side, and in dry summers none too moist on account of its porous subsoil, but this Potato invariably did well, its stout, vigorous haulm withstanding drought well. I used to grow it for a secondary supply in frames, and by pegging the tops down found it answer well.—NORFOLK.

Sowing spring Cabbages.—If this useful crop were sown a little later than usual and more pains taken to ensure the health and vigour of the plants after they are up, I think we should hear less of plants being lost in winter, if not of bolting in spring. A hard, well-developed plant is all right, but this is not secured by starvation treatment. I sow towards the end of July Ellam's Early and April, the latter a useful kind for succession. The seed-bed is made firm and not over-rich, and well soaked with water previous to sowing in drills 6 inches apart. If there is any doubt as to the staple of the border, a little of a good quick-acting fertiliser may be sown with the seeds. A piece of ground cleared of early Potatoes is well trodden, and the plants are poked out in this as soon as ready, going into their permanent quarters towards the end of September. Localities differ, and what is the correct time in one may not suit another, but there are few places where the seed need be sown before the end of July. Larger and later kinds are not sown here until the middle of August, and every care is taken of the plants by hoeing and watering in dry weather. The firm soil and

open position ensure their being hard and well consolidated.—H., *Suffolk.*

Pea sticks and dwarf Ne Plus Ultra.—"J. S.'s" note (p. 107) is suggestive, and his one stick to a plant deserves a trial where Pea sticks and labour are scarce. By keeping Pea tendrils so long idle, I fear we may have weakened their grasping or hold-fast capacity. There are other means of economising Pea sticks, which I practised for years, and which reduces the number one-half and renders the stakes more efficient alike for support and protection. Instead of placing the stakes vertically, give them a long oblique angle with the ground. The stakes are stronger, too, if not placed opposite in pairs, but the stakes on one side to halve the distance between the stakes on the other. Of course, this oblique system of staking lowers the height, but this may save the labour of topping the stakes and render them available for shelter and support along the entire length of the row. Generally far too many stakes are used for staking Peas and the two rows are crowded far too closely together. More room and an occasional stake to connect the two lines reduce the quantity of timber used and give the growing Peas more light.—D. T. F.

BROAD BEANS.

How is it that our hybridisers cannot produce a long-podded Broad Windsor Bean? Broad Beans are amongst the most useful and nutritious of vegetables, and anyone acquainted with the qualities of our garden Beans knows that the Broad Windsor is as superior to all other varieties as the true wrinkled Marrowfat Pea is to the little hard, early garden Pea which is so soon over. All the varieties of the common garden Bean are derived from one species, *Faba vulgaris*, but for garden purposes there are only two sorts in the nurseryman's catalogue—Long-pod and Windsor. The Long-pod is the exhibitor's favourite, and for a long period all the energies of raisers of new varieties have been concentrated on the lengthening of the pod and increasing the number of Beans within it. The Broad Windsor has not altered in any respect since I can remember. Long ago, Thomson described this variety as containing two or three very large Beans in a pod, as an excellent sort, highly esteemed, best for summer crop, and remaining fit for use longer than most others. This character is deserved, only that there are usually as many pods with only one Bean in them as there are pods with the maximum number—three. Yet there is no reason, I believe, why the pods of this variety should not be lengthened and the Beans increased in number. If we could only get an average of three Beans to a pod it would be a distinct advance, and that would appear to be only a matter of careful selection. It is certain that the first man who can produce a long-podded Windsor Broad Bean will make a good thing of it. J. S.

Watering Celery.—I never had more promising rows of Celery than this season, and this I attribute partly to early preparation of the trenches and partly to pricking the young plants straight from the seed beds into the trenches. The quick and vigorous growth made will have taken a good deal of the nourishment from the soil, so that watering and, where possible, feeding with liquid or other manures will be taken in hand at once. Old soot strewed about the rows and watered in is an excellent stimulant to Celery, and more lasting in its effect than quick-acting chemicals. Water in abundance must be given if the produce is to be good, and though it necessitates a lot of labour, this is well repaid by the increased quality and weight of the crop. If this is neglected now the outer stems and foliage that are so useful for protection to the hearts

later on are rendered soft and pippy. Insects, such as slugs, can more readily pass to the hearts, which, of course, will be less solid in character. Feed Celery well and keep the roots moist, and a stout, vigorous plant results. Watering should if possible be carried out in the late afternoon, or preferably on dull days. One thorough soaking of the trenches is better than half a dozen dribbles.—A GROWER.

Constitution in Peas.—I was interested in reading your reply to a correspondent in respect to thrips and mildew attacks on Peas, because you aver that the newer Peas lack the constitution of the older ones. I should very much hesitate to support that statement, because in ordinary seasons I have seen plenty of the more recently raised Peas doing splendidly. All the same, in such a season as the present, when not so much mildew but thrips is rife, and great quantities of Pea plants are almost eaten up by these pests, it is evident that any variety passing through such an ordeal well and quite uninjured, fruiting freely, would seem to retain qualities not possessed by most other varieties. Very recently, going over a group of allotments on which I was called upon to select the best row of Peas, I found it in an admirable one, over 5 feet in height, of the good old Champion of England. This was clean, fresh and podding finely, although the pods were not large. Now it may be a question whether such a variety may not in some respects have more plant stamina because not required to expend so much force in pod production. Then again in this particular instance the row of Peas in question was found on one of the very best cultivated plots, where the soil had been deeply worked and well manured. The worst Peas I have seen this season were on rather poor, thin ground. But universally Peas seem to have been far more affected with heat and drought than last year. I have found in my own trials that the growth was very moderate, the crop short and the plants soon dried up. They are better in deep, rich soils, but in few cases are satisfactory, and unless rain soon comes the customary fine examples seen in August will, at least in the south, be missing.—A D.

Tomato Laxton's Open Air.—One important thing in the cultivation of Tomatoes in the open garden is the selection of hardy varieties. Like Apples and Pears, some are much more hardy in the bloom than others and set their fruit in spite of cold winds and inclement weather. Many a fine batch of plants has been put out as late as the first week in June, and although having the shelter of a south wall they have been sorely crippled by harsh winds. A variety that may safely be recommended for open-air culture generally is Laxton's Open Air. Though by no means handsome in appearance, being much corrugated, it is nevertheless well deserving of wall space, while for training market grower's fashion to stakes, I know of no better. At Earham Hall, near Norwich, I saw on August 11 a grand lot of fruit in various stages of development, some of the lowermost trusses needing support to prevent their weight from breaking them off. At almost every joint for the entire length of the plants was a heavy cluster of fruit. The gardener stated that it was without doubt excellent for outdoor work where fine shape was not the chief consideration. The flavour, too, was very good. Amateurs should give this variety a trial. Even with the freest, most hardy sorts certain simple, though all-important, points must be observed in order to gain success. A weak, puny plant to start with is bound to disappoint. Dwarf, sturdy, gradually hardened plants are imperative. They may then be planted in their permanent quarters the first of June. Shelter from cutting winds from all points is another necessity. Then a few evergreen boughs should be inserted in the ground amongst the plants after planting, removing them say in the course of three weeks. They should be arranged so that while screening they do not unduly shade the plants. Amateurs and new beginners generally often err as to the root-run. Some give too

much rich food, others too little, planting perhaps in the same soil two years running. A good plan is to take out a couple of spits of the old and replace it with fresh compost. Actual feeding is best done when the plants begin to feel the strain of the crop.—NORFOLK.

Transplanting Celery.—Opinions differ a good deal as to the merits or otherwise of pricking off Celery plants before they are transferred to their permanent positions in the trenches. Where the trenches can be prepared early there is a great advantage in pricking straight from the seed-beds to them, but it is quite different in soils difficult to work where the trenches have to be prepared almost directly before planting. I much prefer pricking out in this case. As a rule I have had to hasten on the trenches and plant immediately, with the result that the Celery has been one of the most unsatisfactory of crops, but this season I had a piece of ground to spare and had it out at the beginning of the year. Rotten manure was dug into the bottom and abundance of burnt refuse forked and hoed into the surface-soil, with the result that at the end

sibly safely use some poisonous compounds on Turnips for the insects' destruction, but they could not be so employed on the Cabbage tribe. The best remedy would be found in good rains and ample moisture in the soil, as the beetle does not thrive in moisture.—A. D.

Lettuce Continuity.—In face of the numerous and very favourable references recently made in THE GARDEN by growers as to the excellence of the above Lettuce, all I can say is that either soil or situation, climate or treatment accorded it here fails to develop the extremely high quality it evidently obtains generally. Mr. Burrell suggests I may, unfortunately, have got hold of an inferior strain of this variety. Possibly it may be so, but in my case not, I think, very probable, for Messrs. Daniels Bros. (who were the introducers, I believe) very kindly sent it me for trial, and those I again grew last year were similar in every respect to the original stock, and both were discarded for the same defects, viz., lack of crispness and quality. The heat being so great, the journey long, and the rough usage which seems inseparable from

Turnip seed in drills, as then well broken, but fresh gaslime may be sown between the drills just as the seeds are germinating, and the smell will drive the insects away. Sand or sawdust soaked in paraffin will also emit a very offensive perfume. Still, it is doubtful whether the insects are troubled with discriminating olfactory nerves. Probably they are more susceptible to taste; hence sprinkling the rows of seedlings with soapy water, then dusting with soot, is likely to be more effective. But whilst smotherings of soot, lime, or dust may be freely employed with Turnips, such may not be used over well-developed Cabbages. Nothing is better for these than liberal overhead waterings, as then the roots benefit and growth is greater. It is the experience of most gardeners that the beetle does most harm on poor or shallow soils, as with deeply worked soils well manured the growth is rapid.—A. D.

TREES AND SHRUBS.

RHODODENDRON MYRTIFOLIUM.

THE true species was discovered during the travels of Schott and Kotschy in Transylvania. The plant figured comes from a mountain near Kronstadt, in Transylvania, where it covers the north-western hillsides, flowering abundantly. The species does not grow to a large size. The largest plant I know is about 2 feet through, and grows on chalk in a sandy loam about 10 inches to 15 inches deep. The individual flowers are rather larger than in *R. ferrugineum* and *hirsutum*, and are of a pleasing rosy red, pure white varieties not being very common.—O. FORSTER.

Mr. W. Watson, writing to us about this *Rhododendron*, of which there is a specimen at Kew, says:—

Herr O. Forster's *Rhododendron* is one of the forms of *R. ferrugineum*. (See Kew Hand-list of Trees and Shrubs, p. 61.) We have never succeeded with it at Kew. The other *R. myrtifolium* is a garden hybrid between *hirsutum* and *ponticum*. It is also known as *ovatum* and *ovalifolium*. This grows freely at Kew.

Hypericum Moserianum.—This has been long enough now in cultivation to be well known, and it is fairly cheap as well. It is such a beautiful and useful shrub, that it ought to be planted freely in prominent positions. The trees and shrubs that flower at this end of the summer are all too few, and anyone planting cannot afford to do without one of this kind, which produces plenty of bloom over a much longer season than most things. In shrubberies fringed with herbaceous borders the lack of brightness is not so noticeable now, but between the early summer-flowering and late autumn leaf-colouring there is rather an uninteresting time in shrubberies pure and simple, and anything that blooms late, or by keeping in flower a long time keeps a bit of colour now, should be given a prominent place therein.

Althæa frutex.—This in its many varieties is a showy and free-growing shrub that with ordinary care may be established, and will grow freely in any but the very worst of soils. The plan in vogue in many places of planting it against a warm wall is a good one, for it is very pretty, especially the bright red forms, and if given good soil at the roots will make a lot of growth in a season, thus covering a wall thickly and rapidly. Its only fault is the somewhat bare appearance until quite late in spring, and this is almost compensated for by the delightful fresh foliage and pretty blossoms at this season. Very pretty effects may be had by planting in round or other beds, allowing the plants to take quite their own way, pushing out an extra strong shoot here and there that later on is covered with flower. The lighter forms are not so striking as the deeply-



Rhododendron myrtifolium. From a photograph sent by Herr Otto Forster.

of May the trenches were in splendid order, and, notwithstanding the hot, dry weather since then, the plants have obtained a capital hold, the late welcome rains having given them a good start again. I have never, in fact, had the plants look so promising. I am referring, of course, to maincrop Celery, as Celery is rarely needed here before the end of October, and I do not grow any for early supplies. Under these circumstances the balance is all in favour of not pricking out the plants, but I can well understand that there are times when this is almost a necessity.—H. R.

Turnips.—Unless there is an abundant rainfall during the present month, the prospect of getting Turnips good or plentiful during the winter is indeed a poor one. Not only is the soil so parched and dry that seed germinates badly, but all Brassicæ are terribly infested with the Turnip beetle, which is doing immense mischief to Cabbages, Cauliflowers, winter greens of all descriptions, and is decimating seedling Turnips wholesale. Remedies are not easy to find in face of the abundance of the insect and the existence in any garden of so many host plants. We might pos-

postal parcel service, together with the extremely brittle nature of the foliage, prevents my sending you a sample of what proves here an ideal summer Cabbage Lettuce, to wit, New York. Even in this tropical and droughty season it is large, solid, and crisp.—JOHN ROBERTS, *The Gardens, Tan-y-bwlch.*

The Turnip beetle.—This tiny black insect, and one of the most active, is identical with the insect referred to by "H. H." as doing such harm to Cabbages. It is entomologically *Haltica nemorum*. It is also called the black flea, but is in reality a very tiny beetle. I have seen it very active largely this season on all the Cabbage tribe, including Turnips, especially where the soil is dry. The prevailing heat and drought assist to propagate the insect rapidly, whilst vegetation under these influences becomes stunted and incapable of resisting the insect attacks. Turnips suffer more than Cabbages generally because the leaf is thinner and softer; indeed, it is most difficult to secure growth at all, as the moment the cotyledons appear they are eaten up. It has been recommended to sow the

tinted ones, but still they are very pretty, especially when they become large enough to be effective in the landscape. For this reason when planting is in progress the colours ought to be kept in groups, this being a far more effective plan than mixing them indiscriminately.

FRUIT AND VEGETABLE CROPS.

SOUTHERN.

Worth Park, Crawley.—On account of the severe frost that we had in the early spring, certain classes of fruit, Pears especially, are almost a failure. Of Strawberries and Raspberries there are fair crops, but not so large in size as in previous years. Gooseberries and Cherries are moderate, also Apples and Plums. Those who were fortunate to have their Peach wall outside well covered, thereby preventing the sharp frost from injuring the bloom, no doubt have a fair amount of fruit.

It has been a very trying time for all kinds of vegetation, the nights being so cold through April and May when Peas and all other spring crops were in a young state. With heavy watering and a good mulching of rotten manure, Peas and Beans are very good. I find Chelsea Gem the best Pea for early work, being a very prolific bearer, of good size and flavour, and doing well on a warm south border. The Onion crops are very good, having escaped the disease which was very prevalent in many places last season. Carrots, Beet, Parsnips, and all kinds of Brassicas are very good taking into consideration the hot weather that we are having at the present time.—C. ALLEN.

Castle Gardens, Arundel.—Fruit trees of all kinds bloomed very profusely. I also think the trees were very deficient of moisture, owing to the drought of last year. We had cold easterly winds during that period, which of course were detrimental to the fruit setting. Apples are below the average. The following varieties are bearing crops here: Lord Suffield, Koswick Codlin, Ecklinville Seedling, Wellington, Beauty of Kent, Lane's Prince Albert, Mère de Ménage, Cox's Orange Pippin, Ribston Pippin, and Hambleton Deux Ans. Pears are very thin, as are Apricots. Peaches and Nectarines are an average crop, but owing to the excessive heat it is difficult to keep the trees healthy. Cherries are an average; Morellos heavy. Plums are thin. Early Rivers, Early Orleans, Green Gage, Transparent Gage, Pond's Seedling, and Victoria are bearing good crops. Bush fruits are an average crop; Raspberries good; Strawberries had crop; in some cases a total failure. The season in our light soil was very short. Nuts are an average; Medlars abundant.

Vegetable are suffering very much from want of moisture. I have only registered 1½ inches of rain since May 25. Peas are getting badly infested with mildew. I think highly of Gradus as an early variety to follow Chelsea Gem.—E. BURBURY.

Addington Manor, Winslow.—The fruit crop is a very poor one. Apples on old orchard trees are a failure, on young espaliers a moderate crop. Both Pears and Plums are light. Gooseberries and Currants are scarce, the blossom having been destroyed by frost. Strawberries are the worst crop I have had for years in this garden. In one of our gardens a quarter of a mile distant and 20 feet or 30 feet higher, sloping to the north and in an open situation, cultural conditions the same, I had an abundant and good crop. The first-named garden has a south aspect.

Vegetable crops so far not so very much to complain of. Among Brassicas more plants have gone blind than usual and are in great need of rain. The different successions of Peas are soon over, and Scarlet Runner Beans do not set well owing to the great heat and drought. Early Potatoes are plentiful, but small. Sharpe's Victor is excellent in quality, and so is Snowdrop

at the present moment and a fine crop. Late Potatoes in the field look healthy and strong and promise well for a good crop.—J. MATHISON.

Wentworth Gardens, Virginia Water, Surrey.—Of the fruit and vegetable crops in this neighbourhood I am sorry not to be able to give you a very glowing account, which I attribute to the very late spring frost and cold winds which have been succeeded by unusual great heat and drought. The fruit crop, taken as a whole, is about the lightest I ever recollect. Apples are very light; Apricots none; Peaches fair, but the trees have been badly attacked by blight; Plums are almost a blank; Pears the same; Strawberries about half a crop; Morello Cherries average crop; bush fruits, excepting Gooseberries, average.

Vegetables have been fairly good and plentiful up to the present. Potatoes are small and the late varieties have come very uneven. Late Peas, owing to the dry, hot weather, are looking very indifferent. Root crops are looking fairly well under the adverse circumstances.—W. MARCHAM.

Clophill, Ampthill.—From what I can gather and what I have seen the following is how fruit and vegetables stand this year in Beds: Fruit of all kinds is very scarce, no doubt owing to the late and very severe frosts we had.

Carrots and Onions are good. There is a good supply, and all kinds promise well, but a good soaking rain is needed for the light soils, or the drought will do mischief. Early Potatoes and Peas suffered owing to the dry weather.—W. JOYCE.

The Gardens, Panshanger, Hertford.—In the gardens here Strawberries were very much under crop; Black, Red, and White Currants are a heavy crop; Gooseberries a fair average; Sweet Cherries fair average; Morellos over average; Raspberries over average; Peaches and Nectarines poor; Apricots few; Plums on wall fair average; on standards few; Apples fair average; Pears on wall under average; as standards under average; Cobs are a heavy crop.

Vegetables have been fairly plentiful, and with rain (which is badly wanted) will continue to give a good supply.—JAMES ANDERSON.

The Gardens, Laleham House, Staines.—The late spring frost was most injurious to Strawberry blossom. We registered 17° of frost on March 21. This proved too much for the blossoms of Peaches, although I had a double covering of fish nets.

I have had a good all-round crop of vegetables up to this date. With the short rainfall we have had crops are more or less at a standstill now.—T. ANDERSON.

The Gardens, Wildernesse, Sevenoaks.—The fruit crop in this garden and neighbourhood is not so good as usual. Apricot blossom was spoiled by frost. Peaches are about half a crop; Plums very few indeed; Pears about half a crop; Apples very good and very plentiful. Strawberries are a very thin crop, which I attribute to last year's dry weather rather than to this year's frost. Other small fruits are very good and plentiful.

Vegetables are very good and plentiful, though Peas and Potatoes suffered somewhat from the dry weather in the early part of June and again in the middle of July.—H. ELLIOTT.

Kingston, Surrey.—My numerous visits to all parts of the county enable me to say that, so far as Surrey is concerned, fruit generally is but a moderate crop. The best of tree produce is no doubt found in Apples, of which there seems to be, if not a heavy crop, at least a plentiful one. Some trees are abundantly laden; some are thinly so; not a few have none. But with more rain the Apple crop should, all the same, be a very good one. All sorts are bearing, the season not having favoured one over another. Pears are very thin, the best crops being found on somewhat inferior varieties, such as Autumn Bergamot, Hessele, Windsor, and similar ones. The popular Williams' Bon Chrétien has few fruits. Trees in gardens, whether bush or trained, have

but few fruits generally. Plums are even scarcer. Judging by what I have seen, I should infer that Plums were very scarce indeed, whilst Damsons are almost *nil*. Cherries, both sweet and Morello, have been very good, as they have also been cheap, but Surrey is not a great Cherry county. Bush fruits have been a capital crop, Red, White, and Black Currants and Gooseberries having been very abundant and good. The great value of bush fruits for furnishing crops has been once more demonstrated. Raspberries were excellent at the outset, but the great heat and drought of July told upon them severely in shallow or dry soils. Strawberries were generally hardly more than half a crop. The frost destroyed much of the early bloom, and that was not too abundant, whilst the drought told upon the plants and caused the fruit season to be a short one. Walnuts are very abundant on some trees, and on others there is not a fruit. Small Nuts are not plentiful; indeed, the crop will be but a very partial one.

Vegetable crops are very fair generally, but not all are satisfactory. Potatoes have seldom come so weak and irregular as this season, and in all directions both large and small breadths are seen that show great unevenness and weakness of growth. This is largely due to a mild winter first exciting undue tuber growth, followed on the planting by a spell of cold, ungenial weather, combined with numerous sharp frosts, that greatly checked and weakened top growth. Early Potatoes, though small, have so far been very clean, and little evidence of the usual disease is visible. Peas were, when at their best, a good crop, but still too short an one. The recent hot weather greatly promoted blindness and thrips, and late Peas have been scarce. Broad or Long-pod Beans were good earlier in the season, but became much blighted later. It is a poor crop for light, porous or shallow soils when heat sets in. Cauliflowers have not been satisfactory, the great heat and drought evidently much conducing to club. Cabbages were excellent earlier, but now have become hard and blue. Still, there is little evidence of caterpillar. Parsnips seldom have looked cleaner or better than now. The maggot on that and on Celery has so far been little seen. Carrots have suffered much from aphid, arising from spring cold and July heat. Beets are excellent; so, too, generally are Onions, but on light soils the plants are not strong, although autumn-sown bulbs are good. Vegetable Marrows where well done look well and are fruiting freely. In some few cases Lettuces have been found good, but in most instances inferior stocks have soon bolted off to flower. Dwarf Kidney and Runner Beans look well everywhere, but all need rain to induce free setting of the flowers. On the whole the season for vegetables is a very fair one.—A. DEAN.

The Gardens, Haynes Park, Bedford.—The fruit crops in this garden and neighbourhood are very light. Peaches, Apricots, Pears, and Plums are failures owing to early and late frosts in May; Cherries on walls fair crop; Strawberries a failure; Apples are very light; Gooseberries, Raspberries, and Currants of sorts are fair; Filberts a failure.

Early crops of Peas, Cauliflowers, Beans, &c., are fair; Potatoes very light. Autumn crops promise well if rain comes soon. Onions and Carrots are poor. This has been the worst season I have experienced here during the last ten years.—C. STEWART.

Hanger Hill House, Ealing.—Apples and Pears, taking them generally, are a good average crop. The fruit is clean, and promises to finish well. All stone fruit trees bloomed freely, but owing to the spring frosts suffered severely, especially Peaches and Nectarines. These with me have barely one-third of a crop. The trees, however, are looking well, and were subjected less to insect pests than usual. Plums are a small average crop. The same remark applies to Damsons. Apricots are nearly a failure; Walnuts a fair crop. Strawberries were rather under the average. These, too, suffered from spring frosts.

The crop was very disappointing after promising so well in early spring. Bush fruit of all kinds, especially Raspberries, is abundant.

All kinds of vegetables are plentiful and good, and are looking well for a good supply for autumn and winter. The late spring Broccoli was exceptionally good this year and easily overlapped the early Cauliflower, thus ensuring a supply of one or the other—thanks to the mild winter.—D. COOPER.

The Gardens, Englefield, Reading.—Apples, Pears, Apricot, and Peaches are fair; Plums poor; Gooseberries and Currants good; Raspberries poor. Strawberries were not at all good, the soil about here being too light to produce good crops of fruit. I find the second year after planting I have the best crops. The dry season of late has greatly affected our Strawberry crops.

The vegetables in general look well, but are badly in want of rain.—J. COOMES.

Wycombe Abbey, High Wycombe.—Collectively the fruit crops will be below the ordinary average, and will, without doubt, be of a partial character. With the exception of Cherries, Currants, Raspberries, Walnuts, and Nuts, all other kinds are under the average, and Strawberries never so scarce as they are this year within my remembrance. The lighter crops of such fruits as Apples, Pears, Plums, Peaches, and Nectarines promise to be good, which they ought to be under existing conditions.

The dry state of the weather at certain periods in this year has in some degree, where watering has not been carried out, shortened the season and supply of some subjects as Peas, Beans, Cauliflower, Lettuce, &c., but on the whole the crops look exceedingly well and generally are abundant and good. Potatoes are turning out well and good, with no disease hereabouts. Although not so large or so plentiful as in some seasons, there is at present but little cause for complaint. The early kinds are ripening off very satisfactorily, and the main-crop of these should soon be lifted.—GEO. T. MILES.

Dropmore, Bucks.—Fruit crops are fairly up to the average in this district. Apples promise to be very good, but require now some soaking rains to swell up the fruits. The majority of varieties both as orchard and bush trees are carrying full crops. Orchard trees of Blenheim Orange carried very heavy crops last year, and are consequently very thin this; but, on the other hand, bush trees on the Paradise stock are cropping remarkably well. Nearly all other varieties are bearing freely; therefore it is needless to give many names. Pears are almost a complete failure on wall, bush, and orchard trees. In a few instances some varieties—Williams' Bon Chrétien, Souvenir du Congrès, Doyenné du Comice, Louise Bonne de Jersey, and a few others—are thinly cropped. Apricots are also a very poor crop. Peaches and Nectarines suffered somewhat from a week of severe frost while in bloom, but sufficient of the latter escaped to set good average crops. Waterloo and Amsden June produced ripe fruits in the open by the middle of July. Other varieties promise well and the trees are healthy. Plums are a good crop on wall trees, but almost a total failure in the open on standard and bush trees. Cherries have done well; the crops on orchard trees much above the average and wall trees were also good. Strawberries were only about half a crop and the fruits smaller than usual, owing no doubt to the extreme drought of last summer and the late spring frosts experienced while in bloom. Raspberries are altogether a good and full crop; the fruits of the variety Superlative have been and are unusually fine. Bush fruits generally are good; Filberts and Walnuts abundant.

Vegetable crops are now suffering somewhat from the continued heat and drought. This refers especially to Peas and Cauliflowers. An unusual number of the latter have gone blind and require pulling out and replanting. Peas are affected with maggot, although up to the present

date the yield has been very good. No disease has yet been seen among Potatoes, and the crop is generally good.—C. HERRIN.

WESTERN.

Stoke Edith, Hereford.—The circulars issued and sent out annually by the editor are of great benefit, and result in a mass of very valuable information being obtained from reliable sources, which when published affords very instructive reading. By perusing the reports thus sent in the reader gains a great deal of valuable information regarding the various kinds of fruits and vegetables found to succeed in various localities in different parts of the kingdom. Besides this, these reports also form a kind of *rade mecum* to many, especially those who refrain from giving newly-introduced varieties a trial, and who prefer to wait until they can ascertain how such succeed in the hands of those who make the growing of novelties a speciality. I think the season of 1899 will long be remembered for the profuse blooming of fruit trees, thanks to the heat of the previous season having so thoroughly ripened up the wood. The blooms were also strong and well developed, and had it not been for frost and cold winds, the crop, as far as this locality is concerned, would have been one of the heaviest on record. As it is, I think we have—judging by what I have seen elsewhere and from what I hear—good reason to be well satisfied with the results. The shortest crop will be that of Plums, trees in orchards and in exposed positions having suffered more from the effects of cold winds than frost, the cold north-east winds seeming to have paralysed the blossoms and prevented them from setting. Early kinds have suffered more in this respect than the late ones, but I have seen good crops of both, and, apart from market gardens and fruit farms, trees carrying quite heavy loads of fruit are to be seen in cottage gardens. I put the average for the district at about one half of what it should be. Here I have good crops of both early, mid-season, and late sorts, those worthy of special mention being Early Prolific, Czar, Magnum Bonum, Kirke's, Belle de Septembre, Coe's Golden Drop, Jefferson, and Late Orleans. With regard to Apples, this crop is an excellent one, and so well are orchard trees bearing, that even old and decrepit specimens are to be seen with a good deal of fruit on them. So far as my observations go, Blenheim Orange promises to be plentiful, and I was looking at some trees of this variety the other day which have now carried heavy crops four years in succession. In these gardens Ecklinville, Potts' Seedling, Lord Suffield, Keswick Codlin, Stirling Castle, Loddington, New and Old Northern Greenings, Lord Derby, Reinette du Canada, Warner's King, Cox's Pomona, The Queen, Peasgood's Nonsuch, Lady Henniker, Ribston Pippin, Old Nonpareil, King of the Pippins, Court Pendu Plat, and Tyler's Kernel are bearing heavily. Trees of Cox's Orange Pippin, although not bearing full crops, have a nice lot of fruit on them, and the same may be said with regard to many other choice kinds. Taken altogether, Apples will be quite as plentiful and the yield just as heavy as that of last year. Pears are not such a heavy crop as they at one period promised to be, in consequence of the Pear gnat midge having spoilt so many of them. The trees set an abundance of fruit which swelled off well, but through the attacks of the before-mentioned insidious insect they have been much thinned down on trees out in the open. On walls the attack has been but slight and the trees are carrying good crops. Pears calling for special mention are Marie Louise, Beurré Superfin, Marie Louise d'Ucle, Colmar d'Été, Knight's Monarch, Easter Beurré, Hacon's Incomparable, Beurré Baltet père, Flemish Beauty, Doyenné du Comice, Gratioli of Jersey, Glou Moreau, Easter Beurré, Prince Consort, Seckle, Thompson's, Josephine de Malines, Beurré d'Aremberg and Beurré d'Anjou. The fruits are clean, they are swelling apace, and promise to be very fine, especially those that escaped

the attention of the Pear midge. Growers will have to deal very energetically with this last-named foe and make great efforts to stamp it out, otherwise Pear growing will soon become almost impossible in many localities. Next come Cherries. These have been and are most satisfactory, this remark applying both to sweet and cooking kinds. The trees have made capital growth and have on the whole kept wonderfully clean. Apricots, contrary to expectation, have turned out to be a good average crop both in these gardens and in the neighbourhood. Cottagers will in consequence, unless I am much mistaken, realise excellent prices for their fruit. Peaches and Nectarines are also excellent crops. The trees have made splendid growth and are altogether in a very satisfactory condition. The best laden trees of these are Alexander, Alexandra Noblesse, Dr. Hogg, Crimson Galande, Raymacker's, Royal George, Magdala, Prince of Wales, Barrington, Lord Napier, Elruge and Spencer. Bush fruits, such as Currants in variety, Gooseberries and Raspberries, are extremely heavy crops and most satisfactory in every way; insects in all cases are conspicuous by their absence. Strawberries, too, have done well, and very fine fruit, and that of excellent quality, has been gathered of both Royal Sovereign and Sir J. Paxton. At the present time Oxonian on an east border is affording supplies of splendid fruit, the crop being a heavy one. In the neighbourhood the field Strawberry crop has on the whole been very satisfactory, and, according to report, very remunerative. Strawberry growing for market has become a very important industry in this locality, and the quantities of fruit despatched from here would compare very favourably with the output from many of the Strawberry gardens in the south of England. The fruit crops on the whole are, therefore, very satisfactory, and with the two exceptions, Plums and Pears, being short—the one from adverse weather influences, and the other from insect attacks—fruit has been and will be very plentiful.

Vegetable crops are much better than they have been the past few seasons, just sufficient rain having fallen to keep everything growing without check. Early Peas were much later than usual, Cauliflowers also, but as a counterbalance to this the yield has been excellent in both cases. With regard to Potatoes, there was little if any difference in point of time. Famous was again the earliest variety, the crop being good and tubers large. Sharpe's Victor is rather small, but the crop is a plentiful one. Early Regent and English Beauty are splendid and quite as early as Sharpe's Victor. Second early, medium and late sorts are looking remarkably well, and up to the present there is no sign of disease. As might be expected, successional crops of Peas are first rate both in yield and quality, and late sorts just moulded up and staked look very promising. The first sowings of French Beans have borne earlier than last year, the crop being a good one. For this sowing, Early Favourite and Superb Early were the kinds selected, with the result that there is no difference between them in point of earliness, but for heavy cropping the former takes the palm. Successional batches are very healthy, and consist of such varieties as Fulmer's, Best of All, and Ne Plus Ultra, in the order named. Scarlet Runners—that most productive of all kitchen garden crops—have revelled in the heat and moisture, and will in due course yield well. Spring Cabbages were much later in coming into use. These are now very plentiful, and will be right through the season as batch after batch becomes ready for cutting. A large breadth of Coleworts will be got out in the course of a few days for late autumn and winter supply. The Brassicas generally have been got out under more favourable conditions than of late years, and are as a result looking well. Turnips have given a great deal of trouble in consequence of fly having attacked the young plants as soon as they appeared above ground, but by dint of damping them daily and dusting them occasionally with lime, the enemy has been mastered. Carrots,

Parsnips, and Beet, and both the autumn and spring-sown Onions could not possibly be looking better. Broad Beans are heavily cropped and the quality is good. Celery is growing and looking well, the latest batch having been got out a few days ago. Asparagus has done exceedingly well this season, the produce being very fine, tender and succulent, while growth is all one could wish for. Vegetable Marrows will be very plentiful in the course of a few days; these are being grown on old hotbeds. Salading has been plentiful and good, and later supplies on a north border are equally promising. Outdoor Tomatoes look well, but as these are to form the subject of a separate note, further comment here is unnecessary. Very hot weather has set in during the past week, and should it continue, all vegetables that root near the surface will require water to enable them to keep growing before long.—A. WARD.

Badminton Gardens.—The fruit crop in this garden and immediate neighbourhood is, generally speaking, very poor indeed. Apples, Pears, and Plums are almost failures. The trees bloomed well, but the continued severe frosts in May wrought much destruction, and I think the poorest crop I ever remember of these kinds is the result. Apricots are fairly good, but Peaches and Nectarines are very thin. Small fruits have been a good crop and Strawberries abundant and very good, although the dry weather made the season for them somewhat short.

Vegetables up to now have been good; Peas and Beans especially so, but the drought is now beginning to tell on them, and rain with cooler weather is much wanted.—WILLIAM NASH.

The Gardens, Bosahan, St. Martin, R.S.O.—There is a good average of all kinds of fruit with the exception of Plums, which appear to be very poor generally. Peaches on walls are very good.

Vegetables are also very good with one or two exceptions. Spring-sown Onions took the rust very early, with the result that the bulbs will be rather small, and Peas here and in other gardens have been troubled very much with thrips. Early Cauliflowers have also suffered from wireworm and maggot. There are fine crops of Potatoes, but disease has made its appearance.—J. RUNDLE.

Toddington, Winchcombe, R.S.O., Glos.—The following, I think, represents the state of the fruit crop in this district. Apples, Pears, Plums, and Apricots are very thin; Cherries a good crop and quality good; Peaches and Nectarines poor; Strawberries the worst crop for many years; Gooseberries and Currants fair; Raspberries good. Much damage was done by the frosts in May, and the subsequent drought made the Strawberry crop a very poor one. Fruit trees and bushes look healthy and are free of insect pests than usual.—J. CLEARE.

Wilton House, Salisbury.—Apples are a moderate crop; the foliage of the more tender kinds, such as Lord Suffield, Hawthornden, and Cornish Gilliflower, suffered severely from the frosts that occurred at the end of March, middle of April, and the beginning and end of May. Apricots are scarce. A splendid crop had set, but the three successive frosts of all night duration that occurred on March 22, 23, and 24, 14° of frost being registered each night, proved destructive, although the trees were protected by glass coping and suspended netting in front of the walls. Cherries are fair where trees had been protected. Gooseberries and Currants are abundant, excepting Black Currants, which are scarce. Figs are a light crop. Nectarines and Peaches are abundant crops where the trees had been well protected. The trees were just unfolding their blossoms at the time the severe frosts occurred in the month of March, before alluded to, so did not suffer to such an extent as did the Apricots. Nuts and Filberts are fair crops; Walnuts moderate. Pears partial crop; the foliage of the more tender sorts suffered severely, similarly to that of the Apples and from the same cause. Plums a failure, except on walls well protected, where the

crop is fair. Raspberries are a full crop. Strawberries moderate; fruit small owing to dry weather during the swelling period.

Of Potatoes the early varieties are healthy, but light in consequence of prolonged drought; quality good. Later kinds are looking well, except in very dry positions or where the land is poor. No disease is visible either in the early or late kinds. All the other vegetable crops are looking well. I have observed that vegetables and salads have been singularly free from the attacks of slugs and other insect pests this year. Probably the sudden and severe spring frosts caught them, not napping, but on the move, and so proved to be a blessing on the one hand, if not quite so beneficial on the other.—T. CHALLIS.

Westonbirt, Tetbury, Gloucester.—There was every prospect of its being a good fruit year, but in the last week of April and the early part of May the cold east winds and frost crippled the bloom, and on May 4 and 5 we registered 10° degrees of frost, which destroyed the embryo fruit of Peaches and Nectarines. On the whole the hardy fruits are below the average. Apples, dessert, are bad; cooking, one tree in ten good; Apricots bad, Plums under average, Peaches and Nectarines under average, Cherries, especially Morellos, good, Pears under average, Strawberries good, Raspberries good, Currants average, Gooseberries average, Walnuts where trees escaped frost above the average, in exposed places bad; Nuts, Filberts and Cobs under average.

This is the best season we have had for vegetables for years. Potatoes are good, and up to the present free from disease. The haulm both of second earlies and the late field and allotment crops is looking healthy. Soil has so much to do with Potatoes, I hardly care to recommend any special kinds. Ringleader, Sharpe's Victor, and the old Ash and Walnut-leaved varieties are the principal early kinds grown. Puritan, Early Regent, and Harbinger, an excellent Potato, are the principal second earlies, and Snowflake, Windsor Castle, Up to Date, Magnum Bonum, and White Elephant the principal late ones. Peas have been a good crop. William Hurst is largely grown here as a first early, and holds its own against any newly introduced ones both for hardness, dwarfness, productiveness and eating quality. Gradus, Daisy and Prodigy are the three second earlies. Duke of Albany, Telephone and Maincrop, midseason; Autocrat and Ne Plus Ultra to follow. Other later varieties than these suffer from mildew in this district. All green crops for autumn and those to stand the winter look very promising. Onions are good and free from maggot. Celery is strong. I find an application of moderately strong tobacco juice mixed with water syringed over and underneath the leaves will keep the plants free from the maggot in the leaves.—A. CHAPMAN.

Goodrich Court, Ross.—Fruit crops generally are very good. Apples are over an average crop and are very clean. Among dessert varieties the best are Beauty of Bath, Blenheim Orange, Kerry Pippin, King of Pippins, American Mother, Gascoigne's Scarlet, Worcester Pearmain, and White Transparent. Kitchen varieties carrying heavy crops with me are Alfriston, Bess Pool, Bismarck, Bramley's Seedling, Dumelow's Seedling, Ecklinville, Emperor Alexander, New Hawthornden, Hanwell Soring, Lord Grosvenor, Lady Henniker, Lane's Prince Albert, Peasgood's Nonsuch, Sandringham, Schoolmaster, Seaton House, Stirling Castle, and The Queen. Pears, too, are very satisfactory; those carrying best crops are Beurré Bachelier, B. Diel, B. Clairgeau, B. Sterckmans, Benedictine, Doyenné du Comice, Darondeau, Duchesse d'Angoulême, General Toddleben, Knight's Monarch, Hacon's Incomparable, Marie Louise, Marie Louise d'Uccle, and Pitmaston Duchess. Plums are in many places a failure; ours are a good crop on walls, but lighter on bush trees. Those carrying good crops with me are Coe's Golden Drop, Bryanston, Green Gage, Belgian Purple, Denniston's Superb, Jefferson, Kirke's, Prince Englebert, Pond's Seedling, and

Victoria. Cherries are a full crop, excepting Morellos, which are rather light. The fruit is smaller than usual on account of the drought, which has affected the size of fruit in general. The sorts doing best here are Bigarreau Napoleon, B. Schreter, Black Tartarian, Elton, Knight's Early Black, and May Duke. Apricots are a thin crop, owing to the unfavourable weather when the trees were in bloom. Small fruits are plentiful and good. Strawberries were a poor crop, the only satisfactory sorts being Royal Sovereign and Sir Joseph Paxton. Nuts are a full crop.

The hot, dry weather has been much against vegetables on our dry sandy soil. Among the early dwarf Peas the following have been particularly good: Chelsea Gem, Earliest Forcing, and Harbinger, the last-named being the earliest. Among mid-season varieties, Peerless, Exhibition Marrow, and Main-crop have been much the best here, carrying heavy crops of large, well-filled pods; the Peas are of excellent flavour when cooked. For later crops, the only one I grow is Autocrat, a magnificent variety and one that is hard to beat, bearing well right into the autumn, and one that resists mildew to a considerable extent. Potatoes are rather small, but good. The best I have here are Ninety-fold, a splendid cropper and of excellent flavour, much the best early variety this season; Early Ashleaf, and Puritan; the last-named will be discarded in favour of Ninety-fold. Among second earlies, Ideal, Epicure, Supreme, Satisfaction, and Windsor Castle are the best. For a late variety I depend on Syon House Prolific, a first-rate variety.—F. SPENCER.

GARDEN FLORA.

PLATE 1237.

NEW NARCISSI.

(WITH A COLOURED PLATE OF—1, MONARCH; 2, WEARDALE PERFECTION; 3, LULWORTH.*)

THE illustration faithfully portrays two of the best of all the new Daffodils now in commerce, viz., (1) Monarch and (2) Weardale Perfection, while (3) Lulworth, although much longer known and cheaper, still remains one of the most desirable in the division of the Incomparables to which it belongs.

As shown in the coloured plate, Monarch (1895) is a glorified Emperor of great substance, and perhaps a trifle brighter in colour. Some cultivators have said that it more resembles a golden enlargement of N. Grandee, but in any case it is abundantly distinct and the most beautiful of all the golden Daffodils now grown. So far it has been but sparsely distributed, as the catalogue price has been £12 12s. to £15 15s. per bulb. Weardale Perfection (1894) somewhat resembles a gigantic N. pallidus præcox, and is assuredly one of the best of modern sulphur Daffodils, its list price being £10 10s. Both these noble kinds have been certificated by the Royal Horticultural Society, as also at Birmingham and elsewhere, and there is nothing but the price to prevent their taking a leading place in our gardens. Weardale Perfection is one of the last and best of all the noble set of seedlings raised by the late Mr. Backhouse.

N. Lulworth is a chance seedling brought to notice some years ago by the late Rev. Mr. Kendall, of East Lulworth, but its culture was always restricted until a year or two ago, when a stock which the Rev. G. H. Engleheart had accumulated was distributed by Messrs. Sutton and Sons, of Reading. There are now a good many newer and, in one or two cases, better things in its way, but, nevertheless, Lulworth

* Drawn for THE GARDEN in Messrs Barr's nursery by H. G. Moon. Lithographed and printed by J. L. Goffart.



well grown is a bright and showy flower and one that has a telling effect in a stand of mixed varieties. Another advantage is that it is now fairly reasonable in price.

All the three varieties now figured are of fairly robust constitution and bid fair to retain their pre-eminence in the winning stands at our Daffodil exhibitions for some time to come.

F. W. BURBIDGE.

THE WEEK'S WORK.

KITCHEN GARDEN.

SCARLET RUNNERS.—In very few gardens indeed has rain fallen in sufficient quantity to penetrate to the lowermost roots of crops which carry abundant leafage, and as few things draw the moisture out of the soil sooner than Runner Beans or feel drought sooner, liberal mulching must on no account be neglected. Where washed away by repeated waterings or dispersed by birds in search of food it must now be renewed, both in the case of full-bearing rows and those only just coming into bloom. Peas will each week become more scarce; therefore their nearest substitute, Beans, will become more and more valuable. Close pickings, liberal manual soakings, and occasional baths from the garden hose at eventide must be given even if some such work as hoeing and cleaning have for a time to be abandoned. Those grown on the pinching system must be topped and re-topped if fresh growth is made, and where it is intended to save seed, pods should now be reserved for the purpose, as later produce often does not develop and mature the seed properly, especially if the autumn is wet and sunless.

ASPARAGUS.—There is yet time enough for giving another good soaking of liquid manure or to apply some approved artificial fertiliser to this important vegetable intended for lifting during winter for forcing, and if the advice given earlier in the season, viz., to leave a space of 2 feet between each three or four rows, was acted upon, there should be no difficulty in carrying out the work. If a mulch was applied when the roots were small there should still be sufficient of it left to preserve the moisture about the roots, and should there now be any weeds visible, a little salt added to the manure will assist in eradicating them. Old permanent beds of Asparagus have now become too dense to allow of getting amongst them, but with care a little manure may be distributed broadcast, and will find its way down to the roots through the force of autumn rains. This will also have the effect of enticing a number of new fibrous roots to the surface. These if slightly protected with any rough short litter in winter will quickly lay hold of an actual top-dressing of loamy compost in spring.

TOMATOES.—Midseason plants now bearing semi-ripe fruit will now require a little more care in order to give the fruit a good opportunity of finishing off with a good flavour and to prevent cracking. Especially is this care necessary where the fruit is eaten raw. As the nights are gradually becoming colder, turn on a little warmth in the hot-water pipes in order to create a buoyancy in the atmosphere and abandon afternoon damping down. Neglect of these simple but important details is apt to result in mildew and wholesale cracking. Provided the plants are fairly strong, the use of manure water, and indeed all stimulants, had now better be discontinued. Excessive foliage may well be shortened back to admit of a free circulation of air.

SUCCESSIONAL TOMATOES.—Where frequent sowings have been made there will in some cases now be a batch of plants bearing very small green fruit and bloom trusses. These are usually grown in limited-sized pots, which are the most suitable for plants so late in the season. These should occupy if possible a light, airy, span-roofed structure until the end of September, when removal to an intermediate house will be

necessary, affording a light position. Here they will yield a useful lot of fruit until the winter proper batch comes into use. If at all pot-bound a little feeding may be practised, but let it be in strict moderation for the same reasons as given above. Small plants now being brought on for actual winter cropping must have all the light and air possible, the object being to secure a sturdy, but not rank growth at this advanced season.

EARLY SEAKALE.—With some gardeners the practice is to give a sunny warm border to that batch of Seakale which is to be lifted for very early forcing, say in November. The plants should now be looked over and any weeds which exist pulled out, so as to admit all the air and sun-heat possible, these agents being indispensable for the thorough ripening up of the stools for early forcing. If, by reason of occupying a sunny, sloping position, the plants show signs of distress through lack of moisture, care will be necessary in applying moisture, as an overdose in such a warm root-run may induce a secondary growth, which would be an evil. All ordinary plots of Seakale ought also to be looked through with a view to clearing away all weeds, discoloured leaves, and whatever impedes the entrance of a maximum amount of sunshine, air, and light.

ASSISTING CROPS.—Whatever spare time there may be may well be utilised in administering liberal supplies of liquid manure to all growing crops except where, through a too rich root-run, over-luxuriance is noticeable. Attend first to newly-planted plots of Coleworts, following on with late Brussels Sprouts, Kales, and Broccoli. Celery will respond quickly to a supply of rich food given in liquid form from the farmyard; this immediately preceding the first earthing up, Marrows, Globe Artichokes, Autumn Giant, Walcheren and Self-protecting Broccoli, also pickling Cabbages, deriving much good from one or more liberal soakings. Pickling silver-skinned Onions grown on a thin plot that are now showing signs of maturing may be pulled up and placed in flat hampers to dry, these being easily removed under cover in case of rain.

J. C.

FRUITS OUTDOOR.

PEACHES AND NECTARINES.—The bright and warm weather we have experienced during the past few weeks has done much to bring on in good time the early Peaches, &c., that promised at one time to be so backward, and they have come up well in colour and size. The earliest varieties, and these are certainly the best for outdoor work, will have ripened up by the time these notes appear, but later ones will still be in a backward state, and will pay for further feeding at the roots right up to the time of ripening—that is to say, if the border is in good condition and the trees not gross. In writing of the early varieties I include that, to my thinking, best of all Peaches for outside, Hale's Early, for though it is not the very earliest to ripen, it comes well in advance of the main-crop varieties, and compares well with the best of them from almost any point of view. I mention it particularly here, as I notice a note in a recent issue of THE GARDEN giving it a bad name as a poor grower and not prolific. This is so opposed to my experience, that I think the writer must be mistaken in the variety, and I would certainly urge any of my readers who do not possess this valuable Peach to be sure and grow it. Now is the time to make plans for future operations on trees that have not been quite satisfactory. For instance, a defect often noticed and deplored is that of stone-splitting, which is not only a bad thing in itself, but it admits ear-wigs to the inside of the stone, these rendering the fruit totally unfit for table. A very simple remedy for this is to add a good supply of lime to the soil around the roots, as I believe that the splitting is entirely caused by a deficiency of lime, and have rectified the defect more than once by its use. Old trees or any that have been badly blistered during the past year or two, and which

have not made any clean growth this year, would be best grubbed up and thrown away and their places taken later on by thrifty young trees. See that all swelling fruits are well exposed to the light by tying back any overhanging shoots or leaves from them. Trees cleared of their fruit should be gone over and all surplus wood removed after the same fashion as recommended for trees under glass; indeed, I think this autumn pruning is even more important outdoors than it is indoors, and that the less pruning there is to be done after the trees have lost their leaves the better. Of course, in advising this I am supposing that the system used is the extension system, and that no shortening back of the young wood is permitted, the only thing done being to remove all the shoots that have borne fruit and which can be spared from the trees.

STRAWBERRIES.—Young plantations have had rather a trying time, as there have been but few showers to help them on, and artificial watering never appears to do the amount of good that one might expect from the amount of water used. The greatest help appears to be given by keeping the surface open by using the Dutch hoe and by keeping the runners cut hard back. Having had to make a new plantation of Strawberries in April, I took the opportunity of dibbling out between some of the rows some Onions which had been raised under glass, and I am rather agreeably surprised to find that instead of robbing the Strawberries, the Onions, probably from the slight shade they have given, appear to have helped them, as the plants where the two crops are growing together are well ahead of the others. In using the hoe, take care not to bury the crowns nor to stir the soil deeply, it being quite sufficient to keep the surface in a powdered condition. I advised some months back the early planting out of forced Strawberries with the view of getting some autumn fruit. From a batch of Royal Sovereign treated in this way I am now getting some nice dishes. These will be succeeded by some St. Joseph, which I have had planted in bed fashion, so that they might be covered by frames, and the plants have now a nice crop set on them. Whether this variety will prove an acquisition or not must be proved later, but it is of nice flavour, and a few dishes will be acceptable. Alpines are showing very well this autumn, Belle de Meaux raised from seed being the best grown. It is necessary to look out for mice with these late fruits and to persistently trap them.

GRAPES.—Continue to stop the sub-laterals of those Vines which are vigorous in growth, but do not expose the fruit too much to the light by tying back leaves or bringing the bunches forward, for this would probably encourage mildew, which it would be impossible to eradicate at this late date without ruining the bunches. The Sweetwaters will in the case of old Vines on which the canes have not been renewed lately have almost stopped growing, but Hamburgs and sometimes the little Black Cluster, an excellent little Grape for outdoor culture on the gables of old-fashioned houses, will continue rampant, and if allowed to carry their entire growth after the first stopping the fruits do not get a chance to ripen.

WALL TREES.—On wall trees generally there will be still some fastening back to the walls to be done in the case of growths wanted for extension, and this should not be overlooked, as they are very liable to get broken off through high winds and sometimes from other causes. Trees that are netted should also be looked to in this way to prevent the tips of the growths pushing through the nets and becoming crippled.

CORNUBIAN.

A remedy for the disease in Clematises.—A remedy for black disease which for many years has been the cause of much loss among Clematises and which had of late been attributed to a nematode of the Heterodera species, is described by M. Emile Rodigas in an article in

the *Bulletin d'Arboriculture de Gaul.* He says that when visiting the nurseries of M. Coster at Boskop he saw thousands of plants of Clematis protected at the base of the stem with a kind of sleeve of stout paper, rather wide at the bottom and narrower at the top. These sleeves, he was told, were intended to protect the stems of the young plants from spring frosts and the consequent deterioration which renders them suitable as media for the development of the nematode. M. Rodigas here remarks, by the way, that it is a mistake to attribute to this parasite the decomposition of tissue in Clematises, which is really due to a microbe analogous to the *Bacillus caulivorus*. Among Pelargoniums, Petatoes, Cauliflowers and many other plants as well these bacilli find a medium eminently favourable to their increase in the lower part of the stems when these are in contact with stagnant moisture or disorganised by alternations of frost and thaw. The nematodes come after the bacteria and only when decomposition of the tissues is accomplished. M. Coster affirmed that since he began to make use of the sleeves in the manner above described he has lost none of his Clematises. He has made no change in the method of culture in ordinary use. It may be assumed, therefore, that his plan is one to be recommended.

ORCHARD AND FRUIT GARDEN.

BUDDING PEACHES AND NECTARINES.

THE practice of budding two or more varieties of either Peaches or Nectarines on one tree is not followed so generally as it might be, neither is the advantage gained by doing so fully recognised, especially by owners of small or medium-sized gardens. Even in large gardens with every convenience I have found wide-spreading trees may be made more serviceable by having their branches studded or intermixed with others producing fruit somewhat later, thereby reducing the risk of a glut of ripe fruit at one time and encouraging a more even and regular supply over a longer period, so necessary for private consumption. The same method when resorted to is also appreciated by those growers who compete at the different fruit exhibitions and whose convenience for producing several varieties is somewhat restricted. With a view to getting the greatest possible yield from, perhaps, one medium-sized Peach house, several trees of different varieties are crowded in where really there is only sufficient space to extend one properly. It should be a well-known fact that the heaviest crops of the finest fruit are obtained from strong-growing, unrestricted trees rather than several that have perforce to be restricted unnaturally owing to the want of space. How much better then would it be to rely upon one healthy free-growing specimen to fill the house and use its branches as stocks for different varieties.

The first and most important thing to study is that the trees are quite healthy and sound, and that there is no reason to fear a collapse of roots through an ungenial border or the dying off of branches by gumming for a good number of years at least. Over twenty years ago I was deputed to insert buds of Humboldt Nectarine on the branches of Princess of Wales Peach. For many years, since the varieties are about equally balanced on the same stock, the produce has been in many winning collections at our largest shows, and, so far as I know, will continue to be so. Other trees were treated in the same way with different sorts, affording, as was the desideratum, a large collection of varieties and a continuous supply of fruit. Moreover, many growers are anxious at times to add some new or good old variety to their

existing collection, but are reluctant to discard trees that have proved satisfactory in the past. The latter resource may be avoided by budding the kinds it is the desire to include, establishing them on the young branches of the different trees, and so the object will be gained without loss of time or crop, which must to a certain extent follow where established trees are replaced by young ones.

I have referred to the subject now as the season is with us when the work can be performed with the greatest degree of success, the buds and wood being in a suitable condition for the operation. The details of budding need not be described here, as any intelligent youth who is fond of gardening can bud deftly and successfully. It might be pointed out, however, that care should be taken in selecting the shoots for receiving the buds. These, of course, will be the current season's growth, and preference should be given to those of medium size, rejecting very gross ones, as the latter are apt to gum by the wound made in the bark. It is also wise to choose such shoots as are near to the base of the main branches, so that plenty of room for extending the new variety is secured. The bud, too, should be inserted on the top side of the shoot and also near the base. Care must be exercised in using the knife not to cut or damage the young wood below the bark. This would arrest the proper flow of sap, the bud would shrink from the want of moisture, and a speedy and perfect union would not take place. Where the bark is cut clean with a sharp knife it soon heals, but if bruised in any way it dies back and the inserted bud being exposed to the air fails to grow. In securing the bud in position use broad strips of matting, making the latter moderately firm, but after about a fortnight each one should be examined and the matting slightly loosened if it is found that the bark is swelling above it at either end, which invariably it does. The latter is an important matter and must not be neglected, or the young growth will be strangled as it were, when bad results would follow. Any number of buds may be inserted according to the size of the tree and the wish of the operator, but I advise that a too free use of buds should not be made of any new variety that has not been properly tested. No one would be wrong for instance in budding Early Rivers Nectarine on a healthy tree of a later variety, by which means fruit would be obtained several weeks earlier than formerly from the same trees and treatment, and the season would also be prolonged. The same variety might also be budded on to healthy trees of Early Alexander Peach, the two fruits thereby ripening about the same time, which would add considerably to the dessert table early in the season. Again, healthy trees of some varieties are often a source of trouble to the grower through casting their buds. This, provided cultural details are properly carried out, undoubtedly is the fault of the variety in most instances. Such trees would make first-class stocks for other varieties that do not have this unsatisfactory habit. The position of the buds should be marked by suspending a neat label bearing the name of the variety, which will also warn the pruner later on and prevent the cutting out of the new kinds which it is the desire of the grower to extend.

RICHARD PARKER.

Goodwood.

Apple White Juneating.—More than once I have had occasion to refer to this little dessert Apple, and I do not think it can be planted in the wrong place. I have seen trees towering very high as standards in Essex, their delicate pale-coloured fruit hanging in great profusion, and on

trees trained under the restrictive espalier form it crops equally well. I think all amateurs who cannot afford to experiment with uncertain varieties ought to grow a tree or two of Juneating, as, unless the spring is unusually severe, there is sure to be fruit on the tree, thinning freely being a necessity in more seasons than not. Of course it will not keep long after being fully ripe—in fact, is best eaten from the tree—but if picking is performed when slightly under-ripe and cool storage given, the fruit may be had in good condition for say ten days or a fortnight. Owing to its brisk juicy nature it is very refreshing in hot weather. —B. S. N.

Raspberry Baumforth's Seedling.—There are few Raspberries, I think, to beat this kind. The habit is strong, but dwarf; it is very prolific, and the fruit large, handsome, and excellent. Its firm texture renders it especially suitable for packing or for gathering for home use, some of the newer kinds being too soft. It remains in a profitable condition for a number of years in the same quarters if duly manured and surface-hoed. It would, I think, be comparatively easy to select from Baumforth's Seedling an autumn-fruiting kind, as numbers of the young canes will fruit the first season if allowed, and after the old canes have been cut out there are often several canes that fruit or would do if left. For this reason I usually leave the canes rather thick at first, not thick enough to crowd each other, but sufficiently so that I can afford to cut out a few which show this proclivity to autumn fruiting. Many more sucker growths than are required are annually produced, and this makes propagation very easy and rapid. Any that are not required for forming new quarters should be hand-drawn, as when cut off with the hoe the thickened root-stock gives trouble afterwards.—H.

Insects and Strawberries.—In answer to "H. R.'s" inquiry as to the insect that eats off his Strawberry seeds to the marring of their freshness and beauty, I beg to say this enemy is the common mouse. I found this out first under glass in the case of a house full of the Black Prince. For a few nights a litter of mice overhauled and picked out the seeds from the majority of the fruits, entirely spoiling their appearance. Varieties vary considerably in the size and character of their seeds, Royal Sovereign, Latest of All, and others having more prominent seeds. Those with large seeds are the first and most severely mauled. The most provoking part of the business is that the Strawberries are net eaten: only their seeds. The only exception I have known to this was in the case of a Pine stove with no ripe Pines for the mice to feed upon. It contained two other growing crops—forced Strawberries and Capsicums—and both were badly eaten. But as a rule, both out of doors and in, mice skim off the seeds and leave the flesh of the Strawberries severely alone. It is difficult to get bait sufficiently alluring to decoy the mice from the Strawberry seeds once they have got a taste of their nutty flavour. Notwithstanding all that has been written against the use of short grass, I heard of a bad case here in Edinburgh to-day (July 22) of a good crop crippled and virtually ruined for the season through a heavy mulch of grass with the usual violent fermentation and consequent decomposition.—D. T. FISHER.

—At page 66 "H. R.," Suffolk, complains of many of his Strawberries having been damaged by, he supposes, some kind of insect. When living in South Notts I was for several seasons much troubled by the destruction of many of the finest fruit of President. The seeds only were taken, exactly as described by "H. R.," and the singular feature of the case was that I could not discover any insect at work in the daytime. I believe the damage was done by mice, not the ordinary field or garden mouse, but the tiny black shrew, or sow mouse as it is called in the eastern counties on account of its long pointed nose. The attack on my fruit happened some years ago, so that I almost forget particulars, but

I believe the runs of the mice were discovered among the mulching when the beds were cleared in autumn. I feel sure the damage was done in the night. Varieties having the seeds on the surface, such as Loxford Hall, seem to be preferred by mice.—J. C.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 135.)

DOYENNÉ D'ALENÇON (*syns.*, *Doyenné d'hiver Nouveau*, *Doyenné gris d'hiver Nouveau*, *Doyenné marbré*, *Saint Michel d'hiver*).—The fruit is medium-sized, often lumpy towards the stalk, the stalk short, stout, swollen at the point of attachment, set almost straight in a small cavity or depression. The eye is medium-sized, almost closed, in a cavity sometimes narrow and sometimes wide. The skin is rough, greenish, mottled and spotted brown and grey, passing to yellow at maturity. The flesh is yellowish white. A very good fruit, ripening January—March. The tree is of rather insufficient vigour on the Quince and is free-bearing. In cultivation this variety succeeds in all forms and exposures. It does best grafted upon the Pear.

DOYENNÉ DE JUILLET (*syns.*, *Doyenné d'hiver*, *Jolimont précoce*, *Leroy Jolimont*, *Saint Michel d'Eté*).—Its origin is attributed to the Capucins of Mons, Belgium, about the year 1700. The fruit is small, the stalk fairly stout, fleshy at the point of attachment, fairly long, set straight almost flush with the fruit. The eye is medium-sized, compressed, almost closed by superficial gibbosities. The skin is thick, yellow, freely shaded carmine-red on the sunny side. The flesh is white, half melting, sweet, aromatic, and refreshing. A good fruit, ripening end of June and commencement of July. The tree is of rather insufficient vigour; on the Quince its fertility is great and sustained. In cultivation on the Quince this variety will take small forms, which can be grown against a south wall. On the natural stock as a standard it gives fruit of better flavour.

DOYENNÉ DE MÉRODE (*syns.*, *Baurré de Mérode*, *Double Philippe*, *Doyenné Boussoch*, *Nouvelle Boussoch*).—Originally obtained by Van Mons about 1800, and named after Comte de Mérode de Waterloo. The fruit is large or fair sized, with a bumpy surface. The stalk is stout, set straight in an open deep cavity. The eye is medium, open, in a broad shallow cavity. The skin is thin, delicate, without being smooth, bright yellow, stippled and mottled grey-brown, streaked red on the sunny side. The flesh is white, delicate, tender and melting. A good fruit, ripening September. In cultivation this hardy variety is better adapted for grafting on the natural stock, where it is more vigorous and as early as upon the Quince.

DOYENNÉ DE MONTJEAN (*syns.*, *Doyenné gris de Montjean*, *Doyenné Perrault* or *Perrault*).—Obtained originally by M. Trotter at Montjean, arrondissement of Cholet (Maine-et-Loire). It first fruited in 1858. The fruit is large, almost equally rounded at the two ends. The stalk is shortish, fairly stout, swollen at the point of attachment, set straight in a bumpy cavity. The eye is medium-sized, open in a regular and normal cavity. The skin is thin, rough, yellow, abundantly mottled tawny red. The flesh is white, delicate, very juicy, and agreeably flavoured. A very good fruit, ripening January—March. The tree is of continuous vigour on the Quince and of great fertility. In cultivation this variety should be grafted upon the natural stock. By double grafting, shoots over a yard in length have been obtained.

DOYENNÉ D'HIVER (*syns.*, *Baurré de Piques*, *Bergamote de Pentecôte*, *Pastorale de Louvain*).—The origin of this variety is disputed. It is probable that it was found first in the old garden of the Capucins at Louvain, Belgium. The fruit is large or of fair size, having most frequently the Doyenné conformation. The stalk is stout,

straight, very swollen at the point of attachment, set rather obliquely in a fairly deep and irregular cavity. The eye is medium-sized or large, open, in a shallow cavity. The skin is smooth, tender, green and yellowish, spotted tawny at the eye, rarely tinged dull red on the sunny side. The flesh is whitish, luscious, and juicy, agreeably aromatic, sometimes gritty at the core. A very good fruit, ripening December to April. The tree is of middling vigour on the Quince, very fertile on the natural stock, as also on the Quince. In cultivation this tree does best as an espalier, and on a good exposure east or south, the fruit generally cracking in the open.

DOYENNÉ DU COMICE.—Originally obtained in the garden of the Comice Horticole of Angers. It first bore fruit in 1849. The fruit is large, sometimes very large, variable in form, which is generally that of a Doyenné, the surface bumpy, especially towards the ends. The stalk is stout, rather fleshy, of medium length, set obliquely in a narrow cavity, irregularly embossed. The eye is medium-sized, almost closed in a deep cavity. The skin is smooth, light yellow, mottled and stained red, washed vermilion-red on the sunny side. The flesh is whitish, delicate, very juicy, and aromatic. A very good fruit, ripening October—November. The tree is vigorous on the Quince, of medium and sustained fertility. In cultivation this variety is easy to train, and forms handsome pyramids on the Quince.

DOYENNÉ GOUBAULT.—Obtained originally by M. Goubault, nurseryman, of Angers. It first fruited in 1842. The fruit is medium-sized, more or less turbinate, often more wide than high, bumpy in surface. The stalk is short, of medium stoutness, set in a broad, fairly deep cavity. The eye is medium-sized, open, in a deep, wide, and ribbed cavity. The skin is rough, orange-yellow, mottled and marbled with deep red. The flesh is white, sweet, and highly aromatic. A good fruit, ripening January to March. The tree is of continuous vigour on the Quince, of middling and sustained fertility. This variety should be grafted on the Pear if lasting and good-bearing trees are required.

DOYENNÉ GRIS (*syns.*, *Doyenné crotté*, *Doyenné galeux*, *Doyenné rouge*, *Doyenné roux*, *Neige grise*, *Philippe strié*, *Saint Michel crotté*, *Saint Michel doré*, *Saint Michel gris*).—Of ancient, unknown origin. The fruit is medium sized, with the exact form of Doyenné blanc, sometimes, however, a little narrower at the base. The stalk is fairly stout, short, straight or slightly inclined, in a rather deep cavity. The eye is medium-sized, half closed, in a normal cavity, the skin delicate, thin, rather rough, deep yellow, much stained and marbled with reddish grey, heightened by small black spots. The flesh is white, very delicate, and even more pleasantly marked than that of Doyenné blanc. A very good fruit, ripening October to November. The tree is of continuous vigour on the Quince, of great and sustained fertility. In cultivation this variety requires the same care and position as Doyenné blanc.

DUCHESSE D'ANGOULÈME (*syns.*, *de Penas*, *des Esparonnais*).—Originated as a chance seedling on the farm des Esparonnais, in the commune of Cherré (Maine-et-Loire). The parent plant, which died in 1862, may have been a hundred years old. The fruit is large, of Bon Chrétien shape; the stalk is shortish, stout, more swollen towards the point of attachment, set in a bumpy depression. The eye is small, close, in a deep irregularly creased and embossed cavity. The skin is fairly thick, rough, greenish yellow, strewn with red-brown and green spots, stippled and slightly marbled with red. The flesh is white, luscious and agreeable. A good fruit, ripening October, November and sometimes December. The tree is vigorous on the Quince, of very great and well-sustained fertility. In cultivation this variety is as early to yield on the natural stock as on the Quince. It is easy to train and adaptable to all forms. The Pear Duchesse d'Angoulême has produced two sub-varieties, which are only distinguishable from the type by the colour of the wood and of the fruit.

DUCHESSE PANACHÉE.—This variety is distinguishable by its variegation of wood and fruit. It was obtained and fixed about 1840 in the nurseries of André Leroy at Angers.

DUCHESSE BRONZÉE.—This variety is distinguished by its fruit, of which the skin is bronzed and rather rough; this tint is olive-coloured in the digressions and prominences. It was obtained and fixed in the Côte d'Or.

DUCHESSE DE BÉRY D'ÉTÉ.—Found in 1827 at Saint Herbelain (Loire Inférieure) by M. Gabriel Bruneau, nurseryman, of Nantes. It is a fruit of medium size, rounded, and rather bumpy towards the stalk, which is of medium length, fairly stout, set almost straight in a slight depression. The eye is medium, half closed, in a wide, shallow cavity, the skin delicate, straw coloured, stippled tawny, mottled and shaded rose on the sunny side. The flesh is white, delicate and melting. A very good fruit, ripening in August. The tree is vigorous on the Quince and of good and constant fertility. In cultivation this variety, feeble at the commencement, acquires with age vigour on the natural stock. It forms satisfactory pyramids and may even be established as a standard.

DUCHESSE DE BORDEAUX (*syn.*, *Baurré Perrault*).—Obtained originally about 1850 by M. A. Secher, proprietor of La Gobardièrre in the commune of Montjean (Maine-et-Loire).—It first bore fruit in 1859. The fruit is fair-sized, sometimes more high than wide, uniform in surface, and hollowed towards the stalk, which is of medium length, stout, thickened at the two ends, especially at the stalk end, and set in a wide cavity. The eye is small, half closed in a wide cavity. The skin is thick, light yellow, finely stippled red-brown, abundantly streaked tawny-red. The flesh is white, luscious, and highly aromatic. A good fruit, ripening December—February. The tree is vigorous on the Quince and fairly fertile. In cultivation this variety is easily trained, but grows less well on the Quince than on the natural stock.

DUVERGNIES (*syns.*, *Baurré Duverny*, *Belle Devergnies*, *Prince de Ligne*).—Originally obtained by M. Duvergnies at Mons, Belgium. The fruit is medium-sized, variable in form, most frequently turbinate, rather higher than wide. The stalk is fairly slender, shortish, straight or curved, set slightly inclined upon the base of the fruit or in a small cavity. The eye is small, open or closed in a regular depression. The skin is delicate, thin, light yellow, finely stippled tawny-red, washed pale red on the sunny side. The flesh is white, very melting, and very pleasant. A very good fruit, ripening September—October. A delicate tree and not vigorous upon the Quince, of great and sustained fertility. In cultivation this variety is best grafted on the Pear. Too dry and burning soils appear unsuited to it.

ECHASSERY (*syns.*, *Besi de l'Echusserie*, *Besi Landrin*, *Epine longue d'hiver*, *Verte longue d'hiver*).—Its origin is ancient and disputed, but is believed to come originally from Anjou. The fruit is small or scarcely medium-sized. The stalk is stout, rather fleshy, sometimes shorter, sometimes longer, set between small gibbosities. The eye is small, half-open, almost projecting. The skin is fairly thin, rather rough, citron-yellow, stippled and also slightly stained tawny red. The flesh is white, delicate, juicy, melting, and pleasantly aromatic. A very good fruit, ripening January—April. The tree is of continuous vigour on the Quince, of very great and constant fertility. In cultivation this variety is easy to train, and forms regular pyramids. It is especially adapted to exposed situations.

EPARGNE (*syns.*, *A la flûte*, *Beau présent*, *Beau présent d'Eté*, *Chopine*, *Courge*, *Cucillette*, *Grosse cuisse damc*, *Grosse Madeleine*, *Jargonelle*).—It is of ancient and unknown origin. The fruit is medium-sized, long, pyriform. The stalk is of medium stoutness, long, arching, set obliquely on the inclined point of the fruit. The eye is medium-sized, open, projecting, or set in a very slight depression. The skin is rather thick and rough, yellow, mottled and slightly spotted russet, often

tinged red on the sunny side. The flesh is white, half delicate, juicy, and pleasantly marked in flavour. It is a good fruit, maturing July—August. The tree is vigorous on the Quince, of very great and constant fertility. In cultivation this variety is of rather untidy growth and ill adapted for regular forms. It is specially adapted for standards, when it attains to great dimensions.

EPINE DU MAS (*syns., Belle épine du Mas, Belle épine de Limoges, Beurré de Rochechouart, Colmar du Lot, Duc de Bordeaux*).—Originally found in the forest of Rochechouart, on the Du Mas territory (Haute-Vienne), where the parent tree still existed in 1856. The fruit is medium-sized, pyriform, and regular. The stalk is straight or oblique, slightly curved, set upon the blunted base of the fruit. The eye is medium-sized, open, regular in a normal and irregular cavity. The skin is thick, smooth, citron-yellow, stained rose on the sunny side, with strongly marked grey-black stipplings. The flesh is white and very juicy and agreeably aromatic. A good fruit, ripening November—December. The tree is of medium vigour on the Quince, as early to bear on the natural stock, of great and sustained fertility. In cultivation this variety is hardy, easily trained, and may be grown in all forms, even standard.

(To be continued.)

NOTES ON APRICOTS.

JUDGING from the unfavourable reports which appeared in THE GARDEN towards the end of March when the terribly severe frost visited so many districts, Apricots will be few and far between in many gardens. One is apt to get disheartened under such circumstances, and, so to speak, begrudge the trees the necessary attention for the remainder of the summer. But such a course is very unwise; indeed, if anything a little extra care should be shown the trees, as these occasional failures are in reality a blessing in disguise. If the cultivator has courage enough to meet such disappointment, with the determination to mulch liberally and soak the roots as often as practicable with farmyard liquid, trees weakened by a series of too heavy crops recoup, and are better for years to come. Generally speaking, given fair springs, Apricot trees flower and set so abundantly, that gardeners, after removing perhaps thousands of tiny fruit, sometimes imagine they have overthinned them, when really, as time proves, almost as many more could have been spared. No other wall fruit is so long-suffering as the Apricot, or capable of bearing the strain of excessive cropping, hence the abuse it is often subjected to. But it tells in time. With due feeding and, in the absence of rain, occasional drenching baths to the foliage from the hose, strong wood and stout fruit and wood buds will be formed for the coming season. It must be remembered that a dry root run, even though the trees are barren, is about the most harmful condition Apricots can be found in from March to November.

J. C.

Cropping under fruit trees.—The long protracted drought that has brought moisture-loving crops to a standstill is now seriously affecting the fruit trees, and those that are carrying full crops are either shedding the fruit or it is shrivelling on the tree. In looking over several fruit plantations lately, I have been very much struck by the healthy vigorous look of the trees that have the soil as far as their roots extend kept solely to their own use. Those that are under-cropped with coarse growing vegetables or bush fruits are suffering very much indeed, as the roots of the bush fruits monopolise all the nutriment and moisture from the soil. Unless the staple is exceptionally deep and good, the fruit trees should have the soil for at least 10 feet or 12 feet round the base kept quite clear of every other crop and well mulched with manure. Although the old excuse of spring frost is made year after year and doubtless is sometimes the

cause of loss of crop, I am confident dryness at the root causes far more losses than all spring frosts put together. Strawberries were nearly a complete failure all round here, and no wonder, for last year they were simply parched up until the end of September, when rain started them into growth, too late to perfect their flowering crowns. If the present drought holds on as late as it did last year, the Strawberry crop next year will be sure to suffer.—J. G., Gosport.

The Strawberry season.—At p. 97 an excellent note appears on the Strawberry season with some pertinent remarks as to the sale and growth of the plants. I was pleased to see the note referring to the Chiswick treatment of the Strawberry many years ago, and certainly "Rambler" hits the nail on the head when he states we get better results from young plants than otherwise. For some years I have advocated in these pages the culture of what I term yearlings, and have always had splendid crops till this year. Though the fruits were early there were few. I do not attribute the failure of the crop to the system of cultivation, but to the poor growth the plants made



Apple Cellini. From a photograph sent by Mr. J. Eddie, Freefield Gardens, Inch, Aberdeen.

last autumn. Not only was there a failure of the plants treated as "Rambler" advises, but the older plants likewise failed, so that it was the worst season I have had for many years. There is no loss by growing young plants; indeed, there is a great gain. In many gardens one often sees patchy beds. The young plants give a heavier weight of fruit per acre, at least fruit that commands a better price, owing to its quality, and fewer fruits fill the basket. The variety to grow is a question of soil and culture. Of course, I would not advise such slow growers as Latest of All, Waterloo, or some of the Pine family, some of which make later growth, the runners are less strong, and do not grow away so freely. With what may be termed annual culture there must be strong, early runners. I fear "Rambler's" indictment as to the poor material supplied when young plants are purchased is near the mark. Plants sent at the end of August or even early in September are useless for the next season if heavy crops of fruit are needed. This year all my young

plants were in their fruiting quarters the third week in July, and owing to heat and drought have needed much attention. I fear unless we get a change of weather this attention will be needed for some time, as unless moisture is given the crop will be poor next season. It is useless to fruit plants in such a season as this and get runners also, I mean if annual culture is carried out. If the grower can follow out "Rambler's" ideas he will get much finer fruit and the land will be in better condition for the crops that follow.—G. WYTHES.

APPLE CELLINI.

THIS Apple, now an old inhabitant of our gardens, is, judging by the frequency with which one meets with it both in orchards and gardens, quite as popular as ever. Its value for growing and training in all the recognised forms of tree in this country, together with its free-fruiting and the handsome appearance of the fruit when ripe, is mainly accountable for it having gained this popularity. Whether grown as a standard, bush, pyramid, or espalier, it crops equally well, and it is therefore a suitable kind for the market grower, cottager, amateur, as well as for the professional gardener to plant. The highest coloured fruits, as may be naturally supposed, are yielded by standard trees. Very fine-coloured specimens may also be had from bush trees, which, if they lack the brilliant crimson hue of the former, are quite equal both in size and cooking qualities. As a market Apple it is largely sought after by dealers, and no doubt great quantities are sold for eating in the populous mining and large industrial centres. When fully ripe it is a pleasantly flavoured, juicy Apple, and just such an one as many prefer for eating. As a cooker it is first rate. Its proper season is October and November, but it will keep until the end of the year in good condition; after this it begins to deteriorate. The accompanying illustration conveys a good idea as to the shape of the fruit and its cropping, and will, perhaps, enable intending planters to form an opinion of their own on the subject if they have been at all in doubt about including Cellini in their list of sorts that are to be planted this forthcoming autumn.

Stoke Edith, Hereford.

A. WARD.

Plum The Czar.—Owing no doubt to the great heat of the past few weeks this Plum has ripened abreast of Early Prolific this season. As a rule it is generally a week or ten days later, and therefore forms a good succession to the variety just noted. However, it is a good sort to hang after it is ripe, and provided birds and insects can be kept from attacking the fruits, the fact of their maturing somewhat earlier than usual will make no material difference in my case. From a market point of view this earlier ripening will be an advantage, as I think from what I have both seen and heard that the crop of Early Prolific is rather a short one, while the reverse is the case with regard to Czar. It is a fine looking Plum and larger than Early Prolific, while its cropping leaves nothing to be desired. The tree is a hardy vigorous grower. It may be grown either as a standard, bush or cordon, and is a first rate sort

to grow either for private or market gardens.—A. W.

Strawberries Dr. Hogg and British Queen.—At p. 75 Mr. Crawford asks why we do not grow the above varieties equal to those grown many years ago. I fear in many cases quantity is preferred to quality, as they are not such heavy croppers as, for instance, Royal Sovereign. Another point is that British Queen will not thrive in all soils. I am aware this objection may be met by making the soil suitable for the Strawberry, but it cannot always be done at the time of planting, and growers have to fall back on those kinds that are prolific, and when great quantities are needed, no one can do otherwise with a deficiency of labour. It may be said that this is a step backward, but I am sure Mr. Crawford understands the difficulties of the situation. By all means grow the best kinds if it can be done.—G. WYTHES.

Strawberry Macmahon.—It is strange how fruits differ in diverse localities. I find the above variety poor in quality and somewhat soft if needed to be sent any distance. When I was living in the eastern counties Macmahon was looked upon as the best, and it bore enormous crops. In the south it does not crop so freely, and I have not the high opinion of it that I once had. I have this season seen a good breadth of it in the north, and doubtless "W. O." may have a similar soil and sufficient moisture. In the south this has been the worst season for many years, no matter what the variety. Of course, in such a season it is not fair to condemn any kind. Macmahon is not often catalogued in the south. I find Aberdeen Favourite a much better kind, and though late, it does grandly in a light soil. Doubtless there was much more moisture last season in the district "W. O." writes from, this building up the crowns for this season's crop.—G. W. S.

COLOURING GRAPES.

I READ with great interest the notes on "Current Topics" by "Rambler" on p. 69, but I think he has misread me when he considers my advice to "slightly increase the air when colouring commences" to be not satisfactory. All practical growers must be aware that the life-giving air is necessary at all times, and my argument, plainly expressed, was against the principle of throwing the house widely open as soon as the berries begin to colour. It is not the amount of air that does the harm; it is the upsetting of a proper balance of air and moisture which is bound to occur when the air is suddenly changed. This leads, as I there said, to cracking of the skins of tender varieties, and anyone who has grown say Foster's Seedling or Madresfield Court in company with Black Hamburgh knows how difficult it is, on the one hand, to give sufficient air for the latter without at the same time damaging the former. My note was not written without due consideration, and I may mention that in the house where I have grown my early Grapes this year cracking of Foster's Seedling began simultaneously with the increased air at the commencement of colouring—not badly, for the bunches were still good enough to win first place in strong competition, but enough to warn any careful grower to be on his guard.

It is difficult to know what "Rambler" means in regard to thinning. He does not think that thinning at the time the berries are the size of small Peas relieves the Vines. Perhaps not, but they are certainly not needed, for, as he is careful to point out, lateral growth at that stage is very free, and sap elaboration is amply provided for by the daily increasing number of young leaves. Again, he points out that if the colouring agents are not there by stoning time and the Vines are then overcropped, "these

agents are sure to be deficient." When then must we thin? The more I have to do with fruit culture the more I am impressed with the fact that the earlier the trees—be they Vines, Peach trees, bush fruits or what not—are divested of fruit not required, the less risk there is of damage to that left and the better for the trees. I cannot claim to be versed in physiology, but that which I find leads to good results in culture I practise as far as possible, and can only advise others to do the same. I thoroughly agree with the pithy and concise remarks by "Rambler," and would like to see more of them in THE GARDEN. H. R.

Gooseberry Pitmaston Greengage.—This is, I think, the richest flavoured of all Gooseberries, at least I find the fruits of this variety to be so much appreciated here for the dessert, that no other sorts meet with any favour so long as they are to be had. The fruits are but small I must admit, but this is no serious drawback, if any, as they are quite large enough for dessert. When fully ripe the berries are pale or greenish yellow, semi-transparent, and roundish in shape, and they hang a long time after arriving at maturity. The skins are tender and break easily, the pulp being juicy, sugary and richly flavoured. It is a strong growing sort, the bushes make plenty of wood, and they bear most abundantly. I grow a good many bushes of it, and would advise all who have to send quantities of Gooseberries to their employer's table daily for the dessert to give the above variety a trial.—A. W.

A moist root-run for Black Currants.—An old gardener once said to me that, were he planting Black Currants for profit, he would, if possible, choose a somewhat low-lying situation close to a rivulet or marshes. He further added he would have two sets of trees, cutting one clean down one year and the other the next, such was his faith in young wood for producing heavy crops of fine fruit. I was reminded of his words recently by seeing, I think, the finest lot of Black Currant trees I have ever seen. They were growing in the garden of a farmhouse in Norfolk, the position a low-lying one and not many yards from a narrow river. Moreover, the top soil, which was by no means deep, rested on a subsoil of white marl, with which this part of Norfolk abounds. No doubt the Currant tree roots had gone down into this cool moisture-retaining substance, which seemed to suit them. The crops these trees yielded in average seasons, or when late spring frosts do not cripple growth, are astonishing, the fruit being extra large and of grand quality. The farmer, however, admitted that owing to the low, moist position late frosts did occasionally work mischief with the crop, and that is just what I thought might occur when a similar site was recommended by the old gardener already referred to. I impressed upon my farming friend that he would reap still greater and richer harvests of fruit if he would get out of the old groove and use the pruning-knife more freely, letting in sunlight and air, especially keeping the centres of the trees open. When, however, trees have been permitted to grow for years with but little pruning, the reduction of the wood must be gradual. The right way is to moderate growth from the tree's earliest days.—J. C.

Canker in Melons.—Among the several causes responsible for canker in Melons I should put a rank root-run, coupled with insufficient room to enable the plants to go well away, as decidedly the most to blame. There is very little head-room in the pits in which my Melons are grown—only sufficient to enable them to get a length of 42 inches from the collar of the plant, and, as a consequence, considerable curtailment is necessary to keep them within bounds. No bottom-heat in the shape of hot-water pipes is available, and so to procure this a bed of manure has to be made up. For some seasons I made mounds of earth on this bed of manure and

planted the Melons thereon. The result was not altogether satisfactory, as the plants rooted into the manure before the fruit was sufficiently large to check the growth. Very rank growth followed, and the curtailment of the same was invariably the prelude to canker, this being, I take it, the result of the inability of the plant under restriction to assimilate the ingredients taken in from the manure. This was the theory, and I resolved this year to put it in practice with the view of keeping the roots within bounds rather than allowing them to stray into the half-decomposed manure. So the pit was filled as usual with a well-worked heating material of leaves and manure, and as the work progressed a large pot (inverted) used in Rhubarb forcing was inserted in the centre of each light. Clinkers, with coal ashes over the same, were put in the bottom and rammed fairly tight, the pot afterwards being filled up to within an inch of the brim with soil. I am glad to say that the experiment has proved an unqualified success in the prevention of canker, and now that two crops are over and cleared away I find on an examination of the bottom of the pots that the roots were only just appearing through the clinkers. Naturally this mode of cultivation necessitated a considerable amount of artificial feeding from the time the fruit attained a fair size until the ripening stage. I adhered to my old favourites Blenheim and Gunton Orange, with the addition of Gunton Scarlet, obtained through the courtesy of Mr. Allen, the raiser. It is a very fine Melon.—E. BURRELL, *Claremont*.

PEACH AMSDEN JUNE ON OPEN WALLS.

MR. WYTHES'S notes on early Peaches on open walls at p. 74 will have been read with interest, more particularly so, as without doubt open-air culture is again receiving a considerable share of attention. My opinion is that if gardeners would only deal with the trees in the nick of time in spring, so as to prevent aphids from gaining a footing, the chief barrier to success would be removed. I know one gardener as far north as Retford who grows Peaches on walls with no other protection than that afforded by a narrow glass coping, and yet his trees are the picture of health and produce fruit of high excellence. Aphids is not allowed a moment's grace in spring, as he contends that if once the terminal leaves become curled it takes a whole season for the tree to recover. Mr. Wythes mentions the three American varieties, Amsden June, Waterloo, and Alexander. I can recommend the first as a hardy, sure, and free-cropping outdoor Peach for first early supplies. On a south wall in a midland garden I grew it in company with Hale's Early. Amsden June never failed me, the fruit being large, rather flattened in shape, with a slight furrow. The colour was a black-red, and the flavour, if the fruit was eaten in time, good. I found it necessary to pick them directly they would part from the tree by the use of a little force. If left on until they dropped or left the wood with the least touch they soon turned mealy. If this last point is observed, Amsden June may safely be planted by those who have failed with Alexander and Waterloo. Indoors, if forced gently, this early Peach succeeds well, but it will not stand high pressure until stoned. Like Mr. Wythes, I found it a somewhat weakly grower, but nearly every bloom set, and, what is more, the fruit did not fall. C. N.

Grape Lady Hastings.—I was pleased to read that a first-class certificate had been awarded to the new Grape Lady Hastings. When at Melton several years ago I saw Vines of it in a bearing state and tasted several berries. I thought them delicious: indeed, after tasting both Lady Hastings and Muscat Hamburgh I pronounced the former the better. This is saying a good deal. The Vine is a good grower with luxuriant foliage, and the bunches, which are of good size, colour beautifully, having that Damson hue which all Grape growers like to see. It is particularly gratifying to know that this new Grape belongs

to the Muscat section, as additions of this kind have been few and far between of late years, the majority of the new Grapes having been of a somewhat coarse, thick-skinned nature. Quality is what is mainly wanted, and this in the highest degree is characteristic of Lady Hastings.—J. CRAWFORD.

GRAPE GROS GUILLAUME.

THAT is an interesting note (p. 67) on the above-named Grape. I have sometimes been surprised to see this Grape described as coarse and ill-flavoured. No doubt this description is true when the crop is brought on in too low a temperature and ripens foxy, but when treated to sufficient warmth and well coloured it is, I maintain, quite equal to Lady Downe's, as stated in the note referred to. Gros Guillaume is one of the few Grapes which improve by hanging in the fruit room after being bottled, and I have had it in January more like the Hamburgh in flavour than anything else, although best when ripened in August or early in September. It must not be thought that it will do with little or no heat. A maximum amount of heat, with abundance of fresh air, is what is wanted to do this fine Grape justice. A friend of mine near Epping grew the finest crops of Gros Guillaume I ever saw. Beneath that portion of the border in which the Vine grew ran the hot-water pipes. This was compulsory, and the gardener feared failure in consequence, but, strange to say, that particular Vine outstripped all the others both as regards vigour and fruitfulness. If Gros Guillaume is planted in a rich border, growth is liable to be gross and bunches few, these being long, loose, and ill-furnished. On the other hand, given a rather poor root-run, growth is moderate, firm, and productive, bunches being borne on nearly every lateral, their size also being such as can be appreciated at table. Some little care is needed to secure a perfect set of berries, and in order that the bunches may be plump, the shoulders must not be thinned too much. N. N.

Pear Doyenne d'Ete.—For very early use, before the choicer kinds come in, this is one of the best and far superior in point of flavour and keeping to others in the early section. I saw some fine little trees of it recently covered with the pretty bright fruits, which are certainly very sweet. It does not possess the failing common to many early kinds of decaying at the core almost before it is properly ripe. With a view to hastening it, some growers give it the protection of a wall, but, unless very well fed, the fruit is smaller and inferior in quality to that grown in the open.—GROWER.

Bush Morello Cherry trees.—These have borne heavy crops of fruit this season, the produce being of fine size and exceedingly juicy. Of course, the fruits on such trees ripen in advance of those grown on north and east walls, but are none the less welcome on that account, as they come in extremely useful for cooking after the Kentish Cherries are over. It is astonishing the great quantity of fruit bush trees are capable of producing if they are only kept well up to their work by judiciously feeding the roots from the surface. If this is not done they soon exhaust themselves unless the natural soil is very fertile in itself. If worked on the Mahaleb stock and planted from 6 feet to 9 feet apart, bush trees will, in the course of from two to three seasons, form quite a hedge, and will for years produce great quantities of fruit if given an annual mulching of partly decayed manure.—A. W.

Plum Dymond.—Although this is a very large and most useful cooking Plum, we do not hear about it so often as we might expect. Perhaps the fact of its being rather tender in the bloom has caused planters to fight shy of it. Like the majority of Plums, it is prone to make rank growth if planted in a rich, deep larder, barrenness for a number of years resulting. I should choose for it a soil rather poor than otherwise, attention being paid to surface mulching during the hot summer months. It then bears freely and

continues to do so annually. In the midlands Dymond is a favourite both amongst farmers and cottagers. The finest fruit I have grown has been from a tree on a due south wall. Here, if the tree is well nourished, the fruit swells to a great size and lays on a bloom of great depth and beauty. All who have room should plant at least one tree of Dymond. It makes a delicious preserve.—N.

ROSE GARDEN.

ROSES IN NEW ZEALAND.

I HAD hoped to be able to send you some photographs of New Zealand flora, but, although I have made several attempts, the wind, which is the photographer's pest here, has made the subjects but counterfeit presentments of their proper selves. I send you one of the failures, showing Manuka, Flax, and Cabbage Tree. The Manuka has flowered in great profusion this summer. The hillsides have been white

and where button-hole bouquets are in request it is worth growing for this purpose alone, besides which it makes a very pretty bush in the garden. The plant is of a clean habit of growth and throws up large handsome clusters of flowers that are bouquets in themselves, and very fine for filling large vases or howls about the house. It is one of the very few Roses that look well arranged with Maiden-hair or other Fern in lieu of its own foliage.

Rose Marie d'Orleans.—During the months of August, September, and October, and even if mild until Christmas, this beautiful Rose never fails to produce quantities of its charming flowers. Just now when many kinds appear scorched up this variety is very fine. If ever the Tea Roses are sub-divided into groups according to their vigour (and it would seem to be necessary for a proper arrangement when planting), then Marie d'Orleans will rank as one of the most sturdy non-climbing kinds. As to hardiness, it is equal to any Hybrid Perpetual, and as a garden Rose it stands unrivalled among the coloured Roses. Unlike some of these, it is not a great success



Roses Solfaterre and Climbing Devonensis in a New Zealand garden. From a photograph sent by Mr. J. D. Crooke, Lawrence, Otago, New Zealand.

with it. Most of the hardy kinds of flowers do well in this district. The soil and climate seem to suit bulbs admirably, especially Narcissi, Hyacinths, Gladioli, Anemones, and Ranunculuses; Roses and Asters also do well. The Rose season is from the middle of November to the middle of May. How one cherishes the May Roses! The view sent shows a Climbing Devonensis and a Solfaterre in my garden.

I fancy that birds sing longer here than in England. On June 26, 1898, a thrush began to sing at daybreak from the top of a Deodar in my garden, and sang from that same spot every morning, starting at daybreak, no matter what the weather was like, continuing for an hour or more each morning; and he kept this practice up until July 31. White, in his "Naturalist's Calendar," mentions January 6 as the earliest date at which the song thrush sang with him.

J. D. CROOKE.

Lawrence, Otago, New Zealand.

Rose Mme. de Watteville.—There are few prettier Roses when in the bud stage than this,

under glass, the colour then being rather dull, but outdoors as hush or standard or on a low wall the charming tints of rosy crimson and salmon-pink, together with the pointed and reflexed petals, make it a most attractive variety. When planting, a space of 2 feet each way should be allowed, even more if it can be spared. Do not attempt to prune it. Retain plenty of the new wood, thin out some of the growths more than two years old, and a fine healthy plant will be the result. It is far better to have a good-sized specimen plant of this Rose than a collection of pretty Roses that will not grow well without a lot of coddling.

Rose Souvenir de Mme. Joseph Metral (Tea-scented).—It is possible that the cumbersome name is partly responsible for this Rose remaining in obscurity. I wonder exhibitors have not made good use of it ere now, for really the blossoms are quite up to their standard of perfection. The flower is so heavy and so double that the stem is too weak to support the bloom. The colour is pleasing; just that soft rosy cerise tint that is far too rare among Roses. Bush plants flower freely at the ends of the long shoots. I believe many of these extra vigorous Rose

known as climbers would give much more satisfaction if grown as bushes about 4 feet or 5 feet apart than they do when placed close to a south wall. I have this season a quantity of *Maréchal Niel* plants growing as bushes, and they are now flowering grandly. At first sight one cannot see a bloom, but a search among the foliage will reveal some beautiful golden-yellow flowers, perhaps not so rich in colour as we obtain in spring under glass, but quite good enough for ordinary use. Gardeners would find this and other *Roses* such as *l'Idéal*, *Belle Lyonnaise*, *Mme. Moreau*, *Kaiserin Friedrich*, *Dr. Rouges*, *W. A. Richardson*, *Mme. Pierre Cochet*, *Germaine Trochon*, and even the old *Gloire de Dijon* very useful if grown as stated. Where the flower garden is too small, a row or so of each variety across the kitchen garden, planted upon land recently trenched and in good condition, would yield abundance of flowers, and as they come in when the other *Roses* are waning their value is obvious. Doubtless more bloom would be obtained if the growths were pegged down or left alone, but I believe the best plan is to prune the shoots each year to within about 2 feet of the ground, then the quality of the bloom is well maintained. As the bushes increase in size some of the older growths may be entirely removed, endeavouring as far as possible to retain none more than two years old.—*PHILOMEL*.

ROSES UNDER GLASS.

NOTHING is so charming as fine flowers of *Roses* in early spring, and yet one may go into scores of gardens without seeing a single plant under glass unless it is an insect-infested old roof plant that is hardly looked at except to cut a few flowers when they appear. There are not many gardeners, unfortunately, who can afford a house for *Roses* only, and their only chance is either to grow a few pot plants with other things in a greenhouse, or else to grow climbing kinds on the roof of a conservatory. Neither plan is really satisfactory, but the latter is preferable, for not only do *Roses* in pots do badly in company with other greenhouse plants, but they never look so nice as when growing alone. On the roof or side lights one may grow any of the stronger *Teas* as climbers and excellent results may be obtained; or a few plants may be forwarded in early fruit houses, such as vineries or Peach houses, the gradual increase of temperature practised for the fruit suiting the *Roses* also, though great care will be necessary with the ventilation to avoid mildew and insects. Where a small span-roofed house can be spared for their culture it will prove most interesting in spring. The roof should not be heavily covered with climbing kinds, but a few will do no harm. *Maréchal Niel* is usually looked on as the best climbing *Rose* under glass; perhaps it is, but we do not want all *Maréchal Niel*, and such lovely kinds as *Catherine Mermet*, with its large and beautifully tinted blossoms, or the charming small flowers of such kinds as *Isabella Sprunt*, *Mme. Guinoisseau*, or even *Mme. Lambard* ought not to be forgotten. *Niphotos* again and *l'Idéal* are two eminently suitable kinds, and more than as many again could be named equally worthy. Any of these kinds that are not to be represented on the roof should be grown in pots, and as it is a well-known fact that many *Teas* do remarkably well on standard stems, a few of these should be included. Trained a little they have a better appearance than when allowed to grow wild, but tight training spoils their beauty and should be avoided. The time of year is rapidly approaching when it will be safe to lift plants from the open for potting up. By the middle of September have all in readiness for the purpose—some compost consisting of good fibrous loam and partially decayed cow manure, with some lumps of limestone, charcoal or some hard substance to prevent it running closely together and becoming sour. A good sprinkling of coarse drift sand is also a help in this direction. Lift the plants carefully and pot firmly, using a blunt potting stick, and after all are potted, stand in a sheltered and rather shady

place for a few days, sprinkling them overhead twice daily in fine weather as long as the leaves keep on. They should be well established and may go under glass by the middle of November, and a little pruning may be necessary. The amount of this will vary according to the kind of *Rose* grown. Hybrid Perpetuals and Hybrid *Teas* may be cut fairly hard back, and, when starting, disbudded to what seems the requisite number of shoots, according to the strength of the plant. *Teas*, on the other hand, need only be cut into good firm wood and the small spray entirely cut out. A thorough fumigation may be given before the plants are started, the house thoroughly cleaned, and a low temperature kept up at first with plenty of air. The routine treatment is simplicity itself, and the *Teas* will go on flowering more or less until the outdoor *Roses* are plentiful. Then—say the middle of July—the plants may be thoroughly cleaned and re-potted, cut back a little and put into shape for their season's growth. They will flower strongly and well for a number of years.

Roses on pillars and arches.—I would like to thank "Philomel" for his courteous and instructive reply to my note on this subject. I did not wish to decry *Crimson Rambler* on account of its habit of pushing strong shoots at the base, but simply to point out that this class is not quite suitable for the object I had in view. *Crimson Rambler* has been remarkably fine this year, and very beautiful are the great masses of brilliant blossoms, but I want something that will climb posts 10 feet high and run along a trellis another 10 feet or more without the thickening out at the bottom I spoke of.—*H. R.*

Pillar Roses.—Will anyone give me the names of six pillar *Roses* of any class that will bloom freely in autumn; also the names of three light crimson and three very dark H.P. *Roses* for bedding which are free autumn bloomers?—*B.*

* We think you will find the following first-rate for late-flowering: *Longworth Rambler*, *Kaiserin Friedrich*, *Mme. Marie Lavallée*, *Mme. Georges Bruant*, *Gruss au Topfütz*, *Ulrich Brunner*, and the following for bedding at that season: *Light crimson*: *Alfred Colomb*, *Duke of Albany*, *Dupuy Jamain*. *Very dark*: *Xavier Olibo*, *Charles Lefebvre*, and *Victor Hugo*.—*En.*

A beautiful climber.—A rambling variety with exquisitely shaped flowers each 3 inches to 4 inches in diameter, very double, and of the charming tint of *Comtesse de Nadailac* would well describe that very fine *Rose* *E. Veyrat Hermanos*. It is not much known, for it is rarely if ever exhibited, being rather late. This partly accounts for so many of the delightful climbing *Teas* and *Noisettes* remaining in partial obscurity. Perhaps wall space is limited and what there is is already occupied, but one can resort to standards for this class of *Rose*. Worked on tall stems, say from 3½ feet to 4 feet in height, they form grand heads, and in the case of the variety under notice the pendulous shoots produce fine blossoms at the extreme end and often some distance up the growth.

Rose Souvenir de Therese Levet.—This is a useful variety for cutting. Its pretty brownish-crimson buds have a very telling effect in a bouquet, especially when interspersed among a variety like *Maréchal Niel*. It is sometimes seen in exhibition boxes, for it may, by severely thinning the shoots and buds, be had of a good size. The average blooms upon plants not thinned are very little larger than *China* *Roses*, although of much more beautiful shape and of course very double. *Souvenir de Thérèse Levet* is a very free bloomer. Just now upon standards there are large numbers appearing. It was when introduced some seventeen years ago called the *Red Niphotos*, and in the bud state it has a certain resemblance to that fine old kind, but the flowers are certainly not so deep in petal. It is a pure *Tea* with all the slender wiry growth that distinguishes this tribe from Hybrid *Teas*. For forcing it is very good, but not so useful as *Papa*

Gontier, though of richer colour, and perhaps *Francis Dubrioul* is superior in size. The flowers of the last unfortunately droop.

Roses in July.—Although, perhaps, the finest *Rose* blooms could have been cut towards the end of June, the bushes were loaded with fair flowers and buds in the early days of July. Hybrid Perpetuals, *Teas*, Hybrid *Teas*, and *Chinas* vied with each other for precedence, and, lovely as are the blossoms of all sections, the Hybrid *Tea* *Viscountess Folkestone* still bears the palm for exquisite beauty, the shell-pink petals of a half-expanded flower seeming to admit of no nearer approach to perfection. *La France* has borne some charming flowers, but the silvery pink blooms of *Caroline Testout* have been even more delightful. Adjectives are soon used up in writing of these fair blossoms, and as one studies them they all appear to merit superlatives; at least this is the case with *Souvenir de Catherine Guillot*, *Augustine Guinoisseau*, *G. Nabonnand*, and *Archduchess Marie Immaculata*, *Roses* whose delicate gradations of colouring catalogue descriptions entirely fail to suggest. The large semi-double white, or almost white, Hybrid *Tea* *Mme. Pernet-Ducher* is a most attractive garden *Rose*, while the velvety crimson *Princesse de Sagan*, the deliciously scented *Socrates*, the glowing crimson single *Bardou Job*, and the *China* *Roses* *Irene Watts*, *Laurette Messimy*, and *Queen Mab*, flowers in which shades of rose, pink, salmon, bronze, orange, apricot, chrome, and sulphur are indescribably blended in varied proportions, are all of undoubted excellence. The white *Mme. Plantier* is a *Rose* not often met with now-a-days, but a standard 5 feet in diameter in full bloom has a striking effect. The single white *Macartney* *Rose* commenced to flower during the third week in July, and will now continue to produce its golden centred blooms, with their faint ripe-pear perfume, without intermission until October or November, so that, though it is late in coming into flower, it fully atones for that disadvantage by the lengthened period during which it produces its blossoms. The single whites *R. moschata nivea* and *R. m. nepalensis* have also been in flower.—*S. W. F., Torquay.*

BOOKS.

THE SOLITARY SUMMER.*

AFTER the lapse of a few months the authoress of "Elizabeth and her German Garden" has published another little volume, dealing with the same garden and its surroundings and written in the same fresh and spontaneous style. The solitary summer was spent in the many-gabled house set within the confines of the picturesque German pleasaunce, and although, according to the writer, the seclusion, as far as the anticipated growth of soul was concerned, was a failure, that it afforded scope for an appreciative study of Nature the pages abundantly testify.

When "Elizabeth," for thus the authoress elects to be known to her readers, first introduced the public to her garden, she was struggling, and in the main successfully, to direct the doings of an incompetent gardener, but three years' untiring supervision proved too much for even her equanimity of temperament, and we accordingly now find the garden under the charge of an efficient head, supported by an adequate staff of helpers. This, from the flower-loving reader's point of view, is perhaps to be regretted, since there is less concerning the garden proper than was the case when the writer had to rely on her own unaided discretion, and many questions one would like to ask remain unanswered. As regards *Roses*, we hear nothing of *Laurette Messimy* or *Viscountess Folkestone*, or whether *Dr. Grill* eventually became established. The contemplated yellow border with its background of *Pines* is not alluded to, nor are we told if the *Primroses* ever became naturalised, while the *Bird*

* "The Solitary Summer." London: Macmillan and Co.

Cherries, that were such a feature in the opening pages of the former book, are unmentioned. There is, however, much to charm the lover of Nature, and not a few delicately-limned garden-pictures are presented to the reader's view. The following description of the evening of May Day is particularly felicitous:—

The sky was full of stars and the garden of scents and the borders of Wallflowers and sweet, shy Pansies. All day there had been a breeze, and all day slow masses of white clouds had been sailing across the blue. Now it was so still, so motionless, so breathless, that it seemed as though a quiet hand had been laid on the garden, soothing and hushing it into silence. The flowers shone in the twilight like pale stars and the air was full of fragrance, and I envied the bats fluttering through such a bath of scent with the real stars above them and the Pansy stars beneath.

Elizabeth's idea of a garden is that it should be beautiful from end to end, and in the one of which she writes the endeavour has been made, and evidently with the best results, from the many peeps we are allowed at its charms, to make it "increase in loveliness, if not in tidiness," the further it recedes from the house until its boundary is reached, where, by the Silver Birch plantation, the Azaleas spread their blaze of colour in the early summer. The sentence "In a garden Nature ought to come first, and Art with her brooms and clipping-shears follow humbly behind," is one that will commend itself to all lovers of the informal in the flower garden, and one can enter into the writer's feelings when she prefers the blue Hepaticas overflowing the shrubberies and the Anemones twinkling in the spring like stars in all the corners to the faultlessly trim and scrupulously correct attractions of the conventional garden. The account of the chosen plot of fertile land of irregular breadth with its wealth of hardy flowers conveys the idea of a delightful mixed border, for here are the chaste Madonna Lilies, the tall blue spires of Delphiniums, towering Hollyhocks of tenderest pink, Irises, Carnations, Evening Primroses, glowing Oriental Poppies, and white Lupines, while in the dampest corner, hard by a trickling streamlet, the lovely Japanese Irises hold aloft their spreading falls. The surface of the ground is covered with Mignonette, Stocks, Pansies, white Pinks, and many other flowers, and groups of Sweet Peas, the writer's favourite flowers after Roses, provide a suave colour-harmony. We are told of the Tea Roses with their undergrowth of Pansies, and of the Tulip beds surfaced with Forget-me-nots, of the masses of China Roses and groups of Foxgloves, and of the spring garden in the glade round the old Oak, alluded to in the former volume, with the double white Cherries and Japanese Crabs, and with the surrounding sward filled with Narcissi and Tulips that have taken the place of the purple Crocuses. The garden is rich in Lilacs, white, purple, pink, and mauve, planted in far-off years by a former owner, whose memory is ever kept green in Elizabeth's heart by the living beauty that appears with each succeeding spring, and which leads her to wish to substitute for the lengthy Latin platitudes that face this benefactor's monument the simple epitaph, "He was a good man, for he loved his garden."

The aspect of the September garden in the golden autumn weather, when its mistress is prevented, by the presence of thirty officers who are quartered in the house during manœuvres, from paying it her accustomed visit, is feelingly suggested.

I know how the placid hours are slipping by in uncharged peace, how strong the scent of the Roses and the ripe fruit is, how the sleepy bees drone round the flowers, how still it is down there in my Fir wood, where the insects hum undisturbed in the warm, quiet air; I know what the plain looks like from under the Oak, how beautiful, with its rolling green waves burning to gold under the afternoon sky, how the hawks circle over it and the larks sing above it.

Perhaps, however, the most sympathetic touch is given in the portrayal of a mid-June dawn.

Yesterday morning I got up at three o'clock and passed out into a wonderful unknown world. It was

quite light, yet a bright moon hung in the cloudless grey-blue sky. The flowers were all awake, saturating the air with scent, and a nightingale sang on a Hornbeam quite close to me in loud raptures at the coming of the sun. There in front of me was the sundial, there were the Rose bushes, but how strange and unfamiliar it all looked and how holy. I went down the path leading to the stream, brushing aside the Rockets that were bending across it drowsy with dew, the Larkspurs on either side of me rearing their spikes of heavenly blue against the steely blue of the sky, and the huge Poppies like splashes of blood amongst the greys and blues and pearly whites of the innocent, new-born day. On the garden side of the stream there is a long row of Silver Birches, and on the other a Rye field reaching across in powdery grey waves to the part of the sky where a solemn glow was already burning. There were no clouds, and presently, while I watched, the sun came up quickly out of the Rye, a great, bare, red ball, and the grey of the field turned yellow and long shadows lay along the grass, and the wet flowers flashed out diamonds. What a smell of freshly-mown grass there was, and how the little heaps, into which it had been raked the evening before, sparkled with dewdrops as the sun caught them, and over there how hot the Poppies were already beginning to look—blazing back boldly in the face of the sun, flashing back fire for fire. Then I went down to the Fir wood at the bottom of the garden, where the light was streaming through green stems, and everywhere was the same mystery and emptiness and wonder. Now here I have had an experience that I shall not soon forget—a feeling as though I had taken the world by surprise and seen it as it really is when off its guard—as though I had been quite near to the very core of things.

A vivid picture is drawn of the gorgeous display afforded in the month of August by the yellow Lupines that clothe the surrounding hills with gold and at sunset are dazzling in their splendour, and the writer's love of and sympathy with Nature is exemplified in many passages. Talking of the delights that await the receptive mind capable of reading and understanding the Earth mother's secrets, she says:—

I am sorry for all the people in the world who miss such keen pleasure. It is one that each person who opens his eyes and heart may have. Anyone who chooses to take a country walk may have them, and there are thousands thrust upon us by Nature, who is for ever giving and blessing at every turn as we walk. The sight of the first pale flowers starring the copses; an Anemone held up against the blue sky with the sun shining through it towards you; the first fall of snow in autumn, the first thaw of snow in spring; the blustering, busy winds blowing the winter away and scurrying the dead, untidy leaves into the corners; the hot smell of the Pines when the sun is on them; the first February evening that is fine enough to show how the days are lengthening, with its pale yellow strip of sky behind the black trees whose branches are pearly with rain-drops; the swift pang of realisation that winter is gone and the spring is coming; the smell of the young Larches a few weeks later; the bunch of Cowslips . . .

Elizabeth loves books, and we are permitted to glance at the contents of the shelves that hold her especial favourites. All gardening books and books about gardens of recent publication are there, and "are an unfailing delight," while the wider aspects of Nature have Thoreau, White's *Selborne*, and Izaak Walton for interpreters. In this category one is surprised and almost pained to miss the name of Richard Jefferies, the man who, to reproduce the appreciative and truthful epitaph inscribed upon the pedestal of his marble bust in Salisbury Cathedral, "Observing the work of Almighty God with a poet's eye, has enriched the literature of his country and won for himself a place amongst those who have made men happier and wiser"—the man whose touching "Eulogy" was written by Sir Walter Besant, and who, to quote another writer, was "no mere artist in literary expression, but a prose poet singing in the great temple of Nature."

Elizabeth professes herself enamoured of the charms of poverty, and in one paragraph avers that if she were poor she would content herself with "a piece of bread, a pot of Geranium and a book," and if the weather was fine enough for her to consume her repast under a tree and she could give a robin some crumbs, there would

be "no creature in the world so happy," while in another she descants on the delights appertaining to the occupation of goose-tending, and, imagining herself filling the rôle of goose-girl, declares

For six months of the year I would be happier than any queen I ever heard of. I would begin in April with the King-cups and leave off in September with the Blackberries, and I would keep one eye on the geese and one on the volume of Wordsworth I should have with me, and I would be present this way at the procession of the months, the first three all white and yellow and the last three gorgeous with the Lupine fields and the blues and purples and crimson that clothe the hedges and ditches in a wonderful variety of shades and dye the grass near the water in great patches.

Musing on the attractions of a penury that can never be experienced is a harmless and fascinating conceit, and doubtless Elizabeth herself is fully alive to the fact that in this case, as in many others, "distance lends enchantment to the view." Ability to see the emotional side of things does not blind her to the practical, for did she not remark in a moment of candour in her earlier volume, "It is so sweet to be sad when there is nothing to be sad about." S. W. F.

SOCIETIES AND EXHIBITIONS.

"ONE AND ALL" FLOWER SHOW.

THIS extensive exhibition, which forms an important part of a great co-operative festival, took place at the Crystal Palace, Sydenham, on August 18 and 19. Horticulture played a somewhat prominent part all the week, for, commencing with Monday the 14th, lectures were delivered daily by Messrs. T. W. Sanders, George Gordon, D. T. Fish, Richard Dean, and W. Iggulden on some aspects of popular gardening, and in addition there was a somewhat extensive exhibition of photographs relating to the garden, and prizes were awarded in several instances to these.

The first two co-operative flower shows were held in the conservatory of the Royal Horticultural Society in 1888 and 1889, and the first exhibitors, drawn mainly from working men in different parts of the country, had at the outset somewhat imperfect notions of what constituted quality in flowers, vegetables, and plants. But they were quick to note the preferences of the judges as shown by their awards, and on the first occasion of the exhibition being held at the Crystal Palace in 1890 a considerable increase in quality was observed, and now with but few exceptions the level of quality is so generally good that keen competition ensues. New exhibitors are constantly being attracted, and though some may have hazy notions of quality in vegetables they are furnished with a series of instructive object-lessons of a valuable character. Despite the generally hot, dry character of the summer the entries, which in 1898 amounted to 4138, this year rose to 4703, constituting the largest show yet held. Only one half of the nave was available, but lines of tables had to be placed in side walks. Altogether it is computed a mile of tabling was set up.

The schedule of prizes contained some 300 classes, and is divided into two competitions, one on Friday when the competitors are members and customers of the Agricultural and Horticultural Association, or their gardeners and employes. This being so, a somewhat higher quality in some of the leading produce can be perceived because grown under glass. Collections of vegetables are invited from four different districts. Salop sent some good produce, and so did Oxford; one individual in particular named J. Holton being particularly successful. Runner Beans were very fine, the varieties known as Oxonian and Ne Plus Ultra were to the fore; a dish of the former from J. Holton seemed to suggest the highest possibilities in this popular Bean. Canadian Wonder in good character was the leading dwarf variety. Longpod and Broad Windsor Beans were, owing to the drought, past their best, and the long Beet

was wanting in shape, but the Turnip-rooted type was seen to good advantage. Cabbages, red and white, were few and sunburnt, but Carrots of the Intermediate type were long and shapely, J. Holton again coming to the fore with handsome roots. Cauliflowers were scarce, Celery, red and white, was of fine quality. There was plenty of Cucumbers, frame and ridge. Collections of herbs were good and varied; Lettuce poor owing to the heat. Onions were good, but there can be seen a tendency on the part of some exhibitors to evade the schedule by staging types which are not admissible in certain classes. Some very fine Tripoli Onions were exhibited, and Ailsa Craig and Improved Wroxtton were of large size. Parsnips in a few instances were very fine, but the majority, probably owing to the drought, lacked symmetry. Peas were largely represented by Autocrat, which is a valuable late variety. Potatoes were generally clean and bright. Satisfaction, Windsor Castle, &c., were the best rounds; in the white kidney classes, International Kidney, Snowdrop, and Up-to-date were the best; coloured kidneys were represented by Lord Raglan, Mr. Bresee, and Reading Ruby; coloured rounds by Lord Tennyson, Reading Russet, and Vicar of Laleham. In the way of salading there were collections, also Radishes, Shallots, &c. Vegetable Marrows were in plenty, both white and green, though many of them too old. Turnips were somewhat poor and tough. Tomatoes in some instances were very fine.

Bunches of annuals were very showy; the favourites are Helichrysum, Lavatera, Mignonne, Zinnias, Phlox Drummondii, Asters, Stocks, Sweet Peas, Scabions, Lupines, Coreopsis, Larkspur, &c. It seems necessary for judges to allow a little latitude in this respect, especially in the case of the working-men exhibitors, as they appear to be under the impression that Snapdragons, Petunias, and such like biennials and perennials, if they can be sown in spring and had in bloom by August, are annuals for the purposes of the schedule. Some judges appeared to take this view, and admitted them; others disqualified them. Bunches of annuals in colours were invited; blue was represented by Peony-flowered Asters, blue Cornflower, Larkspur, &c.; red annuals by Nasturtiums, Sweet Peas, Zinnias, and others; yellow by Sweet Sultan, African Marigolds, Eschscholtzia and annual Sunflowers. Indian Pinks were very good, especially the double forms of Hedderwigi and laciniatus. Phlox Drummondii and Sweet Peas made charming bunches, so did Zinnias and Asters. Among the Dahlias the pompon and Cactus varieties were remarkably good, the best types of the latter being shown.

Pot plants of annuals were fairly good; the difficulty appears to be to have them in good condition by a certain date. Asters in pots were good, and Petunias, both double and single, especially so, and there were good specimens of Musk, both the common and Harrison's. Begonias of the tuberous section, double and single, were represented by a few praiseworthy specimens; Coleus was fair. Ferns, both as single specimens and in collections, were represented by well-grown examples of greenhouse Adiantums and hardy varieties. The best Pelargoniums were the zonal and Ivy-leaved, and there were nicely grown and flowered Fuchsias of good bush shape. In the way of fruit there were some very fine kitchen Apples, the best three dishes came from W. T. Stowers, and consisted of Peasgood's Nonsuch, Lord Sulfield and Ecklinville Seedling, all very fine. The same exhibitor had the best three dishes of dessert Apples in Lady Sodeley, Hunt's Early (?) and Beauty of Bath. The best six dishes of fruit came from Mr. T. Osman, who had Alicante and Muscat of Alexandria Grapes, Peaches, Nectarines, Plums and Melons. Open air fruits consisted of Plums, Cherries, Gooseberries, Currants, &c., and they were also shown as single dishes.

Floral decorations were represented more largely on Saturday than on Friday, as many of the exhibitors on Saturday came from long

distances. Plants were not so numerous as flowers, fruits and vegetables, which can be conveyed long distances more cheaply than plants. Saturday's exhibitors may be taken as very largely representative of an entirely new section of cultivators called into existence through the agency of co-operative societies. They come from all parts of the country, travelling long distances by night, bringing their exhibits with them and taking them back in the same manner. One can see by the garb and talk of these people that they are not dwellers in the metropolitan area. The ordinary tripper is not there and there is no noise or confusion. An intense human interest seems to hedge about this second day's show. The exhibits probably exceeded in quantity those shown on the first day by one half, but they were all arranged and ready for the inspection of the judges by eleven o'clock. Generally the subjects were similar in character to those shown on the previous day. Flowers and vegetables preponderated, and in many cases the quality was equal to that exhibited by gardeners. There are so many entries in some of the classes that it is an onerous task to select the three best out of thirty or forty. Many of the exhibitors do not study their schedules of prizes as they should, and in cases where only two dozen bunches of Currants should be staged they put fifty on the plate, and judges were similarly at fault, for they awarded prizes to these. But in the case of so gigantic a show some oversight is natural, and in all cases the best subjects appeared to gain the highest awards. Some modifications appear to be required in the schedule of prizes, and it can be truly said of the promoters that they are always ready to receive suggestions of a practical and useful character.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 29, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. At 3 o'clock a paper on "The Soil considered as Plant Food, and its Exhaustion," by M. Georges Truffaut, will be read.

NOTES OF THE WEEK.

Hyacinthus candicans.—The bold spikes of this fine bulbous plant are now making a capital display in the garden, and if grown in deep and rich soil the plant will well repay it by the vigour and by the increased show of flowers. It is a capital subject for mixing in a bed of dark Dahlias or the like.

Clematis Viticella alba.—For freedom of flowering and purity of colour, it would be difficult to find the equal of this charming summer-flowering Clematis. Of course, it is a well-known plant, though it is not every day in a hot season such as the present that it is seen covered with a perfect sheet of blossoms. Quite recently in a shaded recess against a dwelling-house we noted this in the finest possible condition, and were struck by the great display of flowers, a space some 5 feet wide and 20 feet high being covered by the plant.

Campanula Profusion.—When a large number of the dwarf Bellflowers are past, this pretty plant is one of the most conspicuous in the garden or in any position in which it may be placed. Nothing can surpass it for its profuse flowering. It is not a rambler, but a really charming and beautiful addition to a group already rich in good and free-flowering plants. In its colour it is also quite distinct, a sort of slate-grey with but little blue in its composition. Yet it is this very shade of colour that catches the eye and makes it quite a welcome plant in the garden at this season.

Rose Gruss au Toplitz.—Notwithstanding there is a goodly number of choice and free-flowering Roses in gardens to-day, there yet appears room for others that are as good, if not indeed better. The above is at least of decided merit, and the rich crimson or almost velvet crimson flowers are very effective. It is of the Hybrid Tea section, sending up shoots with a couple of dozen buds at the top in a more or less branching raceme. It was conspicuous when shown

at the Drill Hall last week by Messrs. Wm. Paul and Son, Waltham Cross.

Gladiolus Lady Montague.—This novelty in so far as colour is concerned, is one of the finest that has yet appeared. It is in the main a good shade of yellow, primrose rather internally and shading to a deeper more strictly yellow tone, while externally it is of a more decided yellow and more uniform. The spike unfortunately is not a good one, but as this is more a matter of the corm from whence the spike was taken, and of the moment, so far as being ready for exhibition, little notice was taken, and an award of merit was secured. It is worthy novelties such as this that quickly catch the eye.

Campanula Hendersoni.—The flowering each year of this plant, certainly one of the best of the tufted Campanulas, is worthy of note. There is something so much better than the usual run of the turbinate forms, to which at least it is most nearly related, that at least it must be regarded as superior to most of them. It comes later, too. It is in its way quite distinct, and it is no drawback to it to add that in some gardens it is of slow growth. Good plants possessing this character are the more appreciated, for it is nothing in favour of any plant, however good in flower, if it is destined shortly to become a weed.

Veratrum nigrum.—One quite agrees with the mode of treatment advocated in the note on page 152 of THE GARDEN. In many cases the non-flowering for years of this Black Hellebore is due to unsuitable conditions. Yet it is, I think, naturally less free in blooming than *V. viride* or *V. album*, both of which I have observed to flower more frequently—more regularly one should, perhaps, say—than *V. nigrum*, even in the same gardens and with similar treatment. There is a dwarf *Veratrum*, which I have not met with, named *V. Maackii*, which has dark brown flowers, but is dwarfer than *V. nigrum*. Perhaps someone who has grown this may be able to tell us something more about it and its ways.—S. A.

Kniphofia hybrida Lachesis.—Flame Flowers or Torch Lilies are generally appreciated, although the manner in which they are often staged at autumn shows does not tend to favourably impress the observer. Personally, I have a liking for the scarlet varieties, as we have usually enough of yellow given by other late-flowering plants. There has, however, apparently been a sustained effort to produce yellow-flowered Kniphofias, and the success attained has been wonderfully good. The hybrid *K. Lachesis*—if hybrid it is—is very beautiful, besides having in its favour what is to many an important quality, that of being now moderate in price. The flowers are of a bright orange-yellow, and the heads are both large and symmetrical.—S. ARNOTT.

Ordinary bedding plants and the drought.—A score of years ago or rather more, when the tuberous Begonia was coming into greater notice for the flower garden, it was freely predicted that the end of the scarlet Geranium or zonal Pelargonium was very near at hand. But if the unbiased mind will inquire carefully into the matter, it will readily be seen how utterly the Begonia fails as a summer bedding plant in these very dry seasons, and how abundantly the older plant flowers. The drawback to either one or the other is when the whole garden is given up to the one thing, and when we see only a glare of intense colour on all sides. There is yet room for a little of the scarlet Geranium when this is used in moderation, while the Begonia may still make a display in early autumn.

Anomatheca cruenta.—This pretty plant, while deserving attention from those who grow miscellaneous bulbous things, is not seen so often as its merits justify. The specific name, suggestive as it is of a highly coloured flower, is not in the least degree misleading, seeing the blooms are of a rich crimson-carmine with a dark spot at the base of the lower segments. It is a charming plant, quite out of the common way, and flowers quite late in summer each year. It is one of the numerous introductions from South Africa, and

though not hardy in the open ground, requires but little care to keep it safely through the winter. The care bestowed on the plant to ensure its safety is fully repaid when one is rewarded by a nice full in full blossom. A cool greenhouse is all it needs to grow it well during summer.

Clerodendron trichotomum.—This, which came to this country from Japan in the dawning of the present century, was represented at the Drill Hall last week by a fully-developed tree, or at least a very large portion of such, which had been severed at the ground or quite low down. In any case the example must have been 9 feet high and possibly 18 feet through its widest part, and to say that it was literally loaded with its clusters of white flowers is only bare justice to the plant. Why such a fine piece had been taken was a matter of inquiry, and it was not unnaturally decided that unfortunately the specimen had to be removed of necessity. As the example in question had far exceeded all measurements usually given of the tree, it is but fair to assume the tree to be one of the first to reach this country.

—In reading your report of the last fortnightly meeting of the Royal Horticultural Society a reference to this hardy *Clerodendron* was observed. It leads one to think that a little comparison of the experience of growers who have tried it might be of service. One is not disposed to raise the question of its hardiness, as observation and inquiry have made one satisfied that it is hardy in these islands except in extremely unfavourable conditions. As a hardy flowering plant I have, however, seen reason to think that it is worthless except in some highly-favoured places. This is due to the late season at which it comes into bloom. I have had occasional opportunities of meeting with it in gardens in England, Ireland and Scotland, and in nearly every case the same remark has to be made, *i.e.*, that its buds are formed too late. But for this I would have had it long ago.—S. ARNOTT.

Rudbeckia Golden Glow (syn., *R. laciniata* flore-pleno) was sent to me in flower four years ago by Mr. Gumbleton. Two years ago it had become rather common in English nursery catalogues, but I should say that it has certainly not been in cultivation in England for more than five years, though it rapidly became cheap, not for want of merit, because it is the best of the double large yellow composites. The flowers are so well formed, and live so well in water. Here a plant of it I have had for two years has grown to 10 feet high and is crowded with flowers. I may remark that the plant which was introduced from North America twenty years ago as *R. laevigata* (Pursh) has a single flower, and is also generally considered to be a variety of *R. laciniata*, but it comes into bloom a month later than the type *R. laciniata* and has less divided leaves. The flowers are smaller, but more sturdy and better formed than those of the type. With me it never ripens a seed, though the type produces fertile seed in abundance. I have never been able to ascertain its origin or to be sure of its true place in botany.—C. W. DOD, *Edge Hall*.

—One hopes that the illustration of this double Coneflower in THE GARDEN of August 19 will be the means of introducing it more largely to British gardens. As a garden plant it is even more distinct than can be seen from the scale on which the plant is shown. Those who have seen this double form of *Rudbeckia laciniata* in growth can best realise its merits and its beauties. The flowers are, unless when too strongly grown, not at all lumpy, but are informal enough to make them both pretty in the garden and useful for cutting. The plant has also a good sturdy, upright habit, without being absolutely stiff. Those who wish strong plants of large dimensions which will produce massive blooms will do well to give *R. Golden Glow* strong soil and full supplies of water, but those who like blooms of moderate size will be pleased with those produced on plants grown in a drier position. One thinks this *Rudbeckia* likely to be a favourite plant in

the future, unless the rage for large blooms leads to its being grown into coarseness. It is at present in bloom with me.—S. ARNOTT, *Carse-thorn, by Dumfries, N.B.*

OBITUARY.

T. FRANCIS RIVERS.

WE sincerely regret to announce the death on the 17th of August at Sawbridgeworth of Mr. T. F. Rivers at the age of 68. His name will be a household word all over the world on account of the many varieties of Peaches, Nectarines and Plums that have been raised at Sawbridgeworth. Of Nectarines alone he placed two dozen varieties in commerce, among the first being Lord Napier, which is now grown in every garden where fruit is in demand. Early Rivers, too, quickly advanced in favour, while the latest, Cardinal, is now being largely grown. Of the Peaches that he raised, Early Louise, Early Rivers, Early Beatrice and Early Alfred will be found valuable where forcing is largely carried on. He also introduced many American varieties, including Alexander and Waterloo. Goshawk, Sea Eagle, and Gladstone, besides several other late varieties, were also raised by him. Among the Plums raised at Sawbridgeworth we may mention Grand Duke, Monarch, The Czar, Early Rivers, all of which have now become standard varieties. Among Pears, Fertility, a good market variety, Conference, Mag-nate and Princess may be mentioned, while of Apples we have Rivers' Codlin, St. Martin's, and Prince Edward. Cherry Early Rivers is now one of the most valuable early kinds we have. At Sawbridgeworth there is a fine collection of Grapes, including many Frontignan and Muscadine varieties very little grown, but which, though the berries are small, ought to be taken in hand owing to their fine flavour. Gros Colman, now so largely grown, and Gros Maroc Grapes he was instrumental in putting into commerce.

In T. Francis Rivers, the second Victoria medallist has passed away. He was chairman of the British Fruit Growers' Association, and took a great interest in the exhibition of British grown fruit held at the Guildhall in 1890.

The funeral, which took place last Monday afternoon, was attended by many sorrowing friends and employes.

M. Ferdinand Bergman.—We also regret to announce the death on August 10, at the age of 73, of M. F. Bergman, for many years in charge of Baron Rothschild's gardens at Ferrieres.

M. Henri Vilmorin.—It is with the deepest regret that just as we are going to press we are informed by telegram of the sudden death, on Wednesday morning, the 23rd inst., of M. Henri Vilmorin, head of the firm of MM. Vilmorin, Andrieux et Cie, seedsmen, Paris.

The weather in West Herts.—Another warm week, the seventh we have now had in succession. All the days were again warm, but during the nights preceding the 21st and 22nd the exposed thermometer fell to within 8° of the freezing point. The difference between the highest and lowest readings in the thermometer screen was on several days very considerable, amounting on the 22nd to 35°. At 2 feet deep the temperature of the ground has fallen slightly during the week, and is at the present time about 6° warmer than the average, but at the depth of 1 foot it is still as much as 8° warmer than is seasonable. With the exception of a very slight fall which took place early on the morning of the 19th, no

rain has fallen since the 15th, and no measurable quantity of rain water has now come through either of the percolation gauges for three weeks. The atmosphere remained mostly very calm and dry, while there was again a good record of bright sunshine.—E. M., *Berkhamsted*.

Ownership of fruit growing on overhanging tree.—In my garden is an Apple tree which overhangs my neighbour's garden by not more than a yard, and by standing upon steps in my garden and bending the boughs towards me, I can easily gather all the fruit that is on that part of the tree. My neighbour objects, and says that the fruit overhanging his garden belongs to him. Has he any claim to it?—FAIR PLAY.

* * Your neighbour has no claim whatever to this fruit, and should he pull any Apples off the overhanging part of the tree you may bring an action for damages, and you will have no difficulty in that matter, or you may take criminal proceedings against him for theft. If he chooses, he may cut off the parts of the tree that overhang his garden, but he could not convert the severed parts to his own use. If Apples fall from the tree into your neighbour's garden, he has no right to convert them to his own use; and if he refuses you permission to enter to pick them up, you may enter without his permission, but you must first ask it, and you must not break his fence in entering.—K. C. T.

Melon award.—The misapprehension which exists with respect to the fruit committee at the recent meeting of that body giving an award to an unnamed Melon arose from the fact that the circumstances were unknown to the writer. The award of merit was granted subject to the sender forwarding a name, and also to giving further information as to the culture of the variety, which was said to have been grown quite in the open without protection since about the middle of June, thus making the variety to be a comparatively hardy or outdoor one. The Melon, though a small one, had a soft, succulent flesh of delicious flavour, quite equal to the very best ones from under glass, which all too rarely come to the committee table. It will thus be seen that no departure from established rule has been made.—A. D.

* * We were quite cognisant of all the facts "A. D." refers to. There was no need to make the award at all until the facts as to the Melon had been obtained and submitted to the committee, as has always been done in bygone days. Many a time we have seen the committee take upon themselves to give a name to a fruit which had been submitted without a name and deemed worthy of an award, and why not in this case? This case only establishes a precedent, and anyone can send up any fruit, flower, or vegetable without a name, and, if deemed worthy, it will receive the hall-mark of merit, the name and particulars as to it being sent on afterwards.—ED.

Names of plants.—*Ida F. Smith.*—*Lilium superbum.*—T. A. V.—We believe the climbing Rose of which you send a shoot is *R. multiflora* simplex. It is a good variety for the wild garden, but unless you have plenty of space to spare, we should not recommend you to retain it in the garden. It could be transplanted and budded upon next summer, for it is much employed by nurserymen as a foster stock. Roses budded on this stock and allowed to remain without transplanting make enormous bushes, far larger than upon any other stock. We take the red Rose to be *Maréchal Vaillant*, and the white, *Olga Maria*.—*Anon.*—1, *Manettia bicolor*; 2, *Andromeda floribunda*.

Names of fruit.—*Admiral Koyanob.*—Peaches: 1, rotten; 2, Salway; 3, Barrington; 4, probably Royal George. Fresh leaves ought to have been sent at the same time as the fruit.

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THE GARDEN.

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[SEPTEMBER 2, 1899.

INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—	
Bees and wasps	176
Budding and grafting, some results from	175
Cherry, the Sand, as a stock ..	176
Figs, open-air	176
Peach trees, summer-pruning of	175
Peaches in Russia	175
Pear Beurre Giffard	174
Pears adopted by the Congrès Pomologique of France	174
Plum Denniston's Superb ..	174
Plum Early Violet	176
Raspberries, dessert	175
Raspberries in dry seasons, summer-pruning of	176
Strawberries, flavour in ..	173
Strawberries President and Keens' Seedling	174
Vine borders, loose v. soli ..	175
Vines, ripening young pot ..	176

Trees and Shrubs:—

Ash, the Weeping	178
Caraganas	177

<i>Caragana arborescens</i> var. <i>Redowskii</i>	177
---	-----

Orchids:—

<i>Angreum Scottianum</i>	179
<i>Arpophyllum giganteum</i> ..	179
<i>Cattleya guttata</i> Leopoldi ..	181
<i>Cattleya Whitei</i>	181
<i>Chysis levis</i>	179
<i>Cymbidium eburneum</i>	179
<i>Cypripedium Exul</i>	179
<i>Dendrobium d. Albertisi</i> ..	180
<i>Dendrobium formosum</i>	180
<i>Dendrobium nobile</i> Cooksonianum	179
<i>Dendrochilum filiforme</i> ..	181
<i>Disa grandiflora</i> Borrelli ..	179
<i>Epidendrum aurantiacum</i> ..	181
<i>Laelia elegans</i> Mastersi ..	181
<i>Masdevallia Carderi</i>	179
<i>Masdevallia inflecta</i>	181
<i>Masdevallia leontoglossa</i> ..	181
<i>Odontoglossum hastilabium</i> ..	181
<i>Odontoglossum</i> , autumn-flowering	180
<i>Oncidium dasystyle</i>	179
<i>Oncidium maculatum</i>	181
<i>Oncidium undulatum</i>	180

<i>Pescatorea cerins</i>	178
<i>Schomburgkia tiblicinis</i> ..	179
<i>Stanbopea graveolens</i>	179
<i>Stanbopea oculata</i>	179
<i>Stanbopea oculata</i>	179
<i>Warszewiczella Wendlandi</i> ..	180
<i>Zygopetalum Mackayi</i>	181

Stove and Greenhouse:—

<i>Achimenes</i>	182
<i>Hyacinth in pots</i>	182
<i>Vallota purpurea</i>	182

Garden Flora:—

<i>Lobelias</i> , tall-growing herbaceous	182
---	-----

Week's Work:—

Fruits under glass, work among	183
Kitchen garden, work in the ..	183

Fruit and Vegetable

Crops	184
-------------	-----

Ferns:—

<i>Adiantum formosum</i>	186
<i>Adiantum formosum</i>	186
Fern spores, sowing	186

Flower:—

<i>Eremurus Elwesi</i> in the north	188
<i>Eremurus Elwesi</i> in Mr. Hindmarsh's garden at Alabank, Alabank	188
Flower garden notes	188
<i>Lantanas</i> in the flower garden	187
<i>Leucosium autumnale</i>	188
<i>Lilies</i> , Burmese	187
<i>Omphalodes Luciliae</i>	188

Park and Woodland:—

Pine, the Mountain	189
--------------------------	-----

Societies:—

National Chrysanthemum ..	191
Royal Horticultural	189

Notes of the Week:—

<i>Abutilon Golden Fleecy</i> ..	191
<i>Antholyza paniculata</i> ..	192
<i>Bouvardia Humboldtii</i> grandiflora	191
Clove, the old Crimson ..	191
<i>Crocea latifolia</i>	191
<i>Dipladenia Sanderi</i>	191
Garden, notes from a Cornish ..	191
<i>Helianthus decapetalus</i> ..	192
<i>Lathyrus latifolius albus</i> ..	192
<i>Lobelia Queen Victoria</i> ..	191
<i>Nepenthes</i> at the Drill Hall ..	191
<i>Polygonum baldschuanicum</i> ..	191
Sunflowers	191
Thrips on flowers	191
<i>Tritoma Uvaria</i>	191
<i>Tritoma rosea</i>	192
<i>Tropaeolum speciosum</i> ..	191

Obituary:—

Vilmorin, Henri de	193
--------------------------	-----

Miscellaneous:—

<i>Gypsophila paniculata</i> ..	187
Leaves falling	183
Munches, N. B., a note from ..	181
Weather in W. Herts	192

ORCHARD AND FRUIT GARDEN.

FLAVOUR IN STRAWBERRIES.

MR. WM. ALLAN'S note (p. 99) on this subject suggests a consideration about the line hitherto taken, and that which may profitably be taken in future, by raisers of new Strawberries. One sees at the outset that the matter must be regarded from two quite different and almost opposite points of view by market gardeners and private growers. If the market man can be supplied by the raisers with kinds combining a heavy crop with size, colour, and firmness of berry, he will eagerly buy them without regard to flavour, for, unfortunately, the public seems to care little about this. The aim of the raiser and his productions have thus been greatly vitiated of late years. With all thanks to Messrs. Laxton, for instance, for the good work they have done among Strawberries, it must be confessed that very many of their new kinds have been of poor flavour. Even Royal Sovereign, which, taken all in all, is their greatest success up to the present date, cannot be said by any good judge to be of first-class flavour. The extent to which their Noble was grown is a proof how the public will swallow (literally) the very worst flavoured fruit.

The private grower, on the other hand, who would put flavour first finds himself very often hampered in this aim. British Queen has always been singled out as a Strawberry of peculiarly delicious flavour, and therefore as an obvious factor in cross-breeding to gain new high-flavoured varieties. But, unluckily, British Queen altogether refuses to grow in many districts, and this fastidiousness as to soil is transmitted to its offspring. Empress of India is on this account entirely valueless over a large part of the country. Here in N.W. Hampshire it fails, and only a few days ago I was staying with a friend who had been obliged to reject it from his large collection of Strawberries, although his garden is absolutely different from mine geologically. He is a gar-

dener of well-known ability and experience, and if cultivation could have established this variety it would not have been discarded. As Lady Suffield is the offspring of parents both of which contain British Queen blood, it is improbable that it will be amenable to general cultivation. Therefore Mr. Allan's high estimate of the fortunate consequences of crossing Countess and British Queen must be accepted with considerable limitations. What is required is a race of Strawberries of really high flavour which will grow vigorously and crop freely on any soil, good cultivation being, of course, always presupposed. It is, of course, not impossible that out of a great number of seedlings bred from British Queen on one side, one might be some day secured which retained the Queen flavour without the Queen constitution, but this is rather a forlorn hope. In my opinion by far the best all-round Strawberry for crop and flavour, conjoined with vigorous growth on all soils, is President, a fruit which has never quite received the due of its merits. It makes the best of preserve, and commends itself to most palates as a table fruit of fine, rich flavour. Much allowance must, of course, be made for different tastes. President suits my own, as containing a little more acid than such kinds as Veitch's Perfection, Empress of India, Countess, and others. These are very sweet and rich, but to my mind just a little flat and cloying when eaten in any quantity. Veitch's Perfection is, perhaps, the very richest of all, but this, again, is by no means everybody's plant, and unfavourable reports as to its behaviour have reached me from very diverse localities. The so-called perpetual Strawberries, St. Joseph, Oregon, &c., are very deficient in flavour, for fruits of such small size will never be much esteemed unless of quite unusually fine flavour. The desideratum is a fruit as rich and sweet as Veitch's Perfection, but just a trifle more brisk, on a plant which will flourish and crop abundantly on any British soil. It will come some day, for many minds and hands are at work on Strawberries.

At present the position is this: Several of the old varieties still hold their ground, a proof that there is no such superlative excellence in the new introductions as would appear from advertisements and shows. Shows are now held always and everywhere, and a box of fine new Strawberries can easily be seen, tasted, and plants freely sold on the strength of it. But when bought it commonly happens that they refuse to succeed like the older sorts in the garden to which they are sent. It is also an age of advertisements, and it is observable that every new Strawberry brought out is described as of excellent, high, rich, vinous, or similar adjective, flavour. In sober fact the advance made in Strawberries during the last ten years or so has been moderate and not at all startling, nor is it easy to indicate the line along which to work for greater results. If we knew for certain the parentage of such kinds as President and Vicomtesse, to take these as types of well-flavoured fruits with no special soil requirements, we should be helped. I quite agree with Mr. Allan that there must be loss rather than gain in such a step as re-crossing Empress of India with British Queen; the twice infused Queen blood must bring the resulting progeny too near to British Queen and limit it to a few soils. A point of excellence on which I should myself lay some stress is the absence of hard external seeds. Their great abundance on Royal Sovereign makes it unpleasant in the mouth and unwholesome to myself, and others tell me the same. It may serve as a useful stimulus that the ideal Strawberry has yet to be raised; the best qualities are still distributed over several good kinds, but united in none. I have myself been attempting a somewhat new departure in cross-breeding Strawberries, but am as yet not over sanguine as to the outcome, and certainly will not prophesy until it has been put to a rigorous proof.—G. H. ENGLEHEART.

— In his interesting note on the pedigrees of his Strawberries raised at Gunton Mr. Allan refers to Veitch's Prolific as a dark-coloured fruit.

Surely that is an error. So far as my knowledge of that excellent variety is concerned, I regard it as having more of the colour of British Queen than of Countess. One reason why I like Prolific so much, apart from its abundant cropping and high flavour, is its bright colour. I think that Royal Sovereign, just now the most popular Strawberry in cultivation, owes very much of its popularity to its bright scarlet hue, one that does not tarnish and become dull or objectionable in appearance when kept, as is the case with varieties of the Waterloo colour. But the oddest thing in Mr. Allan's remarks is to learn that Countess is chiefly responsible for giving Prolific its flavour, and not the highly flavoured British Queen and Empress of India. I have always thought that of all the Strawberries in cultivation British Queen was the highest flavoured. But whether it was wrong to use Empress of India in crossing British Queen or not—and to the mass of people it matters not one atom—the result seems entirely to justify the parentage, as Prolific so far has proved to be the best flavoured of all the newer Strawberries. One objection to some new ones is the profusion of seed-pips on the surface of the fruit, causing them to feel as rough in the mouth as alpenes. From that defect Prolific is free. But whilst pedigrees have little interest for the Strawberry grower in general, they no doubt have much for the raiser. Still, I fear it will be generally conceded that all the blends of the finest flavoured varieties have so far given nothing more highly flavoured than are some of the parents.—A. D.

Plum Denniston's Superb.—Judging from the seldomness with which this Plum is mentioned in reports of fruit crops, I should imagine it is but little grown, but were I planting half a dozen dessert varieties, Denniston's would certainly be one of them. It matters not whether grown on a wall or in bush or standard form, it is a constant and prolific bearer, and, what is more, of first-class flavour. True, it is not large, but sufficiently so for dessert, and if once tasted at table it will be asked for again. To those who do not mind slightly shrivelled fruit I would say, leave a few on a wall tree until this stage is reached, and they will have delicious sweetmeats. It bears freely in quite a young state.—J. C.

Pear Beurre Giffard.—This early, handsome Pear is worthy of more general cultivation; indeed, I think it is to be preferred to some of the extra early ripening varieties, such as Citron des Carmes. It succeeds well on the Quince and is fairly prolific. The fruit is long, tapering, and extremely handsome, colouring up beautifully when exposed to the sun. The flavour is brisk, juicy, and refreshing if eaten in time. The fruit will keep in an eatable condition for a short time if gathered as soon as it parts from the tree, but it is never better than when eaten from the tree. I have grown Beurre Giffard as a horizontal cordon, in which form it does fairly well, but the growth is really too irregular for that style of training.—N. N.

Strawberries President and Keens' Seedling.—Being interested in Strawberries, I read with much interest the notes on the above by "H. R." and "D. T. F." and am of the same opinion as "H. R." I have found Keens' Seedling too small for the dessert. I admit there is no question as to quantity, but after the first fruits are gathered there are too many small ones. I am aware by the latter remark I lay myself open to criticism, but there is a demand for large fruits. It may be bad taste, but in these days growers have to respect that taste and grow kinds that are popular. For preserving, the small fruits are just the thing. Such fruits sent to market are classed as seconds or even lower, and do not pay the grower. By this it will be seen why large fruits are favoured by growers. The other remark of "D. T. F." is one that needs little comment. I thought the value of Royal Sovereign was too well known in the counties named for anyone to be surprised at it superseding Keens' and President. Most of my later years have been spent in the

counties named, and though President is retained by private growers it is much less grown than formerly, and Keens' less than the other.—S. M.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 166.)

FAVORITE MOREL.—Originally obtained by M. François Morel, of Lyons, about 1870. The fruit is large or of fair size, a long Bon Chrétien in shape. The stalk is fairly slender, woody, curved, of medium length, set almost straight on the narrowly truncated fruit. The eye is open, regular, nearly flush with the rounded top of the fruit. The skin is rather rough, brilliant, changing from yellow to golden, slightly mottled with light tawny. The flesh is white, delicate, close, melting, and very juicy. It is a very good fruit, not liable to turn off, and ripening September and October. The tree is vigorous even on the Quince and very fertile. In cultivation this variety forms handsome pyramids, attaining large proportions.

FIGUE D'ALENÇON (*syns.*, *Bonissime de la Sarthe*, *Figue d'hiver*, *Silvange d'hiver*).—Originally obtained by M. Lecomte Mortefontaine about 1829 at Cussay, near Alençon. It is of middling size, long, pyriform, obliquely pointed and embossed near the stalk, which is short and thick, and is an oblique continuation almost of the fruit. The eye is small and open, placed sometimes flush with the fruit, sometimes in a slight depression. The skin is uniform without being smooth, yellow, spotted tender green, stained russet, shaded red-brown on the sunny side. The flesh is yellow, melting, very sweet, and highly aromatic. A very good fruit, ripening November–December. The tree is vigorous on the Quince and of great and sustained fertility. In cultivation this variety is easy to train and can be adapted to all forms, but likes a warm exposure and soil for the fruit to acquire its excellent quality.

FONDANTE DE CHARNEU (*syns.*, *Beurré des Charneuses*, *Désirée Van Mons*, *Duc de Brabant*, *Légiton*, *Miel de Waterloo*).—A chance seedling found near the village of Charneu, in the province of Liege, Belgium. The fruit is of fair size, in shape Bon Chrétien. The stalk is thickish, of medium length, set in an oblique depression, the eye medium-sized and open, set in a wrinkled cavity, the skin thin, light green, shaded pale yellow, largely stippled tawny, and sometimes red on the sunny side. The flesh is yellow, delicate, melting, very juicy and aromatic. A very good fruit, ripening September–October. The tree is of middling vigour on the Quince, of medium or satisfactory fertility. In cultivation it is easily trained, affecting naturally the pyramidal form. Double grafting and somewhat long pruning are favourable to its vigour and fertility.

FONDANTE DES ROIS (*syns.*, *Belle de Flandres*, *Beurré Duvy*, *Beurré Spence*, *Bosc peer Excellen-tissime*, *Guyotte à Heuze*, *Impératrice de France*).—Originally found in a wood near Alost, Flanders. The fruit is large, sometimes very large, Bon Chrétien shape, regular in contour, the stalk shortish, not stout, set straight in a narrow, deepish, and regular cavity. The eye is medium-sized, half open, in a shallow, regular, and wide cavity. The skin is thin, yellow, stippled grey and green, washed red-brown and carmine on the sunny side. The flesh is white, juicy, with a pleasant aroma. A good fruit, ripening September–October. The tree is of normal vigour on the Quince, of great and sustained fertility. In cultivation this variety is hardy and easy to train, lending itself to all forms. It does equally well as a standard, when its fruits attain a handsome size.

FONDANTE DE PANISEL (*syns.*, *Délices d'Angers*, *Délices d'Hardenpont d'Angers*).—Originally obtained about 1762 by the Abbé d'Hardenpont at Mont Panisel, near Mons, Belgium. The fruit is medium-sized, spherical or conical-oval, wider or as wide as high, with a bumpy surface. The stalk is short, thick and fleshy, continuing a pro-

tuberance at the end of the fruit. The eye is medium, open, in a deep and wide cavity. The skin is rough, thick, golden yellow, stained tawny and red-tawny on the sunny side. The flesh is yellow, melting, very juicy, and pleasantly aromatic. A very good fruit, ripening October. The tree is somewhat deficient in vigour on the Quince, and is of great and sustained fertility. In cultivation it is easy to train, affecting naturally the pyramidal form. It requires to be grafted on the Pear in order to attain to large dimensions.

FONDANTE THIRRIOT.—Originally obtained in 1858 by MM. Thirriot frères at Moulin à Vent, Charleville (Ardennes). It first fruited in 1862. The fruit is of fair size, pyriform and narrowly hollowed about the stalk, regular in contour. The stalk is stout, long, rather thick, set straight, or nearly so, in a fold. The eye is small, open, in a normal and regular cavity. The skin is rough, bright yellow, much stippled grey-brown, washed rose and mottled red on the sunny side. The flesh is white, very juicy, and pleasantly aromatic. A very good fruit, ripening at the end of October to December. The tree is fairly vigorous on the Quince, very vigorous on the Pear, and of great fertility. In cultivation this variety does well on all stocks, but it is best to graft it on the Pear to obtain handsome trees.

FONDANTE BOISSELOT.—Obtained originally by M. Boisselot, of Nantes. It first fruited in 1861. The fruit is of fair or medium size, more wide than high, regular in contour. The stalk is stout, long, curving, set rather obliquely in a wide and fairly deep cavity. The eye is medium sized, closed or half closed, in a rather deep, wide cavity. The skin is thick, greenish yellow, partly washed with dull reddish grey. The flesh is white and delicate in flavour. It is a good fruit and ripens January–February. The tree is vigorous on the Quince and on the Pear, blossoms much, but is only fairly fertile. In cultivation this variety thrives on all species of stocks and quickly forms pyramids.

GRASLIN.—A chance seedling found on the Malintourne estate belonging to the Graslin family at Flée (Sarthe). The variety was propagated by Dr. Bretonneau in 1841. The fruit is of fair size, bulging on one side, irregular in form. The stalk is long, stout, fleshy near the fruit, set on the blunted point of the fruit. The eye is medium sized, open, in a shallow, wide and regular cavity. The skin is thick, light yellow, stippled and stained tawny, sometimes rosy on the sunny side. The flesh is white, luscious and agreeably aromatic. A good fruit, ripening October–November. The tree is of normal vigour on the Quince and fertile. In cultivation this hardy variety may be grafted on all stocks and cultivated in all forms.

HELENE GREGOIRE.—Obtained in 1840 by M. Gregoire Nelis, of Jodoigne (Belgium). It first fruited in 1852. The fruit is medium or large in size, Doyenné in form, more or less embossed about the stalk, which is stout, short, swollen at both ends, and set in a narrow cavity surrounded by unequal bumps. The eye is open, in a shallow, wide, irregular cavity. The skin is thin, delicate, golden, mottled and streaked yellow, very slightly tinged orange-red on the sunny side. The flesh is very delicate, juicy and deliciously aromatic. A very good fruit, ripening September–October. The tree is of normal vigour on the Quince and fertile. In cultivation this easily trained variety naturally affects the pyramidal form; it, however, succeeds in all forms and on all stocks, but it requires a warm soil.

JALOUSIE DE FONTENAY (*syn.*, *Belle d'Esquermes*).—Found originally on the Bonchereau estate near Fontenay (Vendée) and propagated by M. Levécque about 1828. The fruit is of medium size, pyriform. The stalk is stoutish, fairly long, sometimes straight on the point of the fruit, sometimes turned aside by a small gibbosity. The eye is medium-sized, oftenest closed, in a shallow cavity, the skin fine, unctuous, straw colour, abundantly stained russet green, tinged chamois on the sunny side. The flesh is white, delicate, and deliciously aromatic. A very good

fruit, ripening September—October. The tree is of medium vigour on the Quince, of great and constant fertility. In cultivation this easily trained variety is specially adapted for the pyramidal form.

JOSEPHINE DE MALINES.—Obtained originally in 1830 by Major Esperen, of Malines. The fruit is medium-sized or nearly so, embossed near the stalk, which is of medium length, stout, fleshy, set in a slight bumpy depression; the eye small, open, in a small wide depression; the skin thickish, citron-yellow, marbled tawny-brown, relieved with orange-yellow, with rusty stipplings on the sunny side. The flesh is rosy white, very delicate, juicy, sugared, with a pronounced aroma of rose. A very good fruit, ripening throughout the winter until March. The tree is vigorous on the Quince, of normal fertility. In cultivation this variety lends itself fairly well to regular forms. It requires long pruning, leaving the spurs to be fertile. It adapts itself well to espalier form, which improves the size and quality of the fruit.

JULES D'AIROLES.—Originally obtained in 1836 by M. Leon Leclerc, of Laval. It first fruited in 1852. The fruit is large, Bon Chrétien shape, rounded at top, and hollowed towards the stalk. The stalk is stout and thickish, of medium length, set in a cavity. The eye is medium, open, with erect sepals in a shallow and wide cavity; the skin uniform bronzed yellow, slightly tinged carmine on the sunny side. The flesh is white, very delicate, oily, and rather musky. A good fruit, ripening November—December. The tree is of normal vigour on the Quince, of great fertility. In cultivation this variety forms satisfactory pyramids. It may be grafted on the Quince or on the Pear.

(To be continued.)

Dessert Raspberries.—I am pleased to note a revival of Raspberries for dessert, and I note there is a liking for those kinds with a brisk flavour. The handsome Superlative is one of the best in this respect. In the report on the fruit crops, Mr. Thomas says the Raspberry is much appreciated at Windsor as a dessert fruit. There can be no question as to the value of the Raspberry for dessert, and I wonder it has been neglected so long. The yellow-fruited kinds are most valuable for that purpose, they being even superior to the red sorts. Before glass became so common the Raspberry was always recognised as a dessert fruit. We have excellent red varieties in Hornet and Baumforth's Seedling, these with the later Superlative being the leading red varieties. New Guinea is also a splendid new white. To this may be added the older Yellow Antwerp, a large pale yellow fruit, sweet, and of good flavour, and if still later kinds are desired there are the October Yellow and Orange d'Automne. —S. M.

Peaches in Russia.—If I remember aright, "R. K." a year or two ago inquired as to the best early Peaches, and some readers of THE GARDEN replied. I think the two varieties he condemns were recommended. A season's failure with any one kind does not prove that the variety is bad; indeed, I am sure many of our home growers who grow Peaches in quantity will not agree with "R. K.'s" remarks. Of course, many of us do not know of the difficulties of forcing in Russia and it is unfair to criticise, but when "R. K." says Amsden June is poor and flavourless I certainly do not agree with him. The remark that it is bitter points to the culture being at fault. I grow it largely, and there can be no fault found with it. I admit it has faults, but all Peaches, American kinds or otherwise, if left after being ripe on the trees lose flavour badly. Far better gather a day too soon than too late, as, like some kinds of Pears, these Peaches are best gathered and placed in a cool room. I am surprised at "R. K.'s" condemnation of Hale's Early, as this, I consider, one of the very best of the early varieties. There is certainly something wrong with the treatment when Hale's Early gives such few fruits, and the few

fruits have split stones. The losing of the leaves points to some defect. It is difficult to advise when such an excellent variety as Hale's behaves so badly and is only fit for the rubbish heap.—G. W. S.

SOME RESULTS FROM BUDDING AND GRAFTING.

HAVING an old tree of the true Early Grosse Mignonne Peach, and fearing its early collapse, which the occasional or yearly decaying branches indicate with some certainty, I inserted a few buds on to another large and healthy tree of Alexandra Noblesse growing in the adjoining or second early house, the old tree for many years furnishing a good crop in the early one. Alexandra Noblesse, as is well known, matures its crop a good deal later than the Grosse Mignonne; yet, strange to say, these conditions are quite reversed by the union of the early on the later variety. Some of the fruit from the Alexandra Noblesse were soft and ready for use, while the others were quite hard, and all were cleared before the Grosse Mignonne had ripened its crop. It is not a little curious that the union of an early variety on a late one should change its character so completely. There is, too, a distinct loss of colour brought about by the same cause, the early one taking on a good deal of the paleness of Noblesse. In flowering it was most profuse, and in setting it was equally free. Another instance showing the variable influence of grafting is furnished in an outdoor Pear. The stock—a French variety whose name I am unable now to give—was headed down because of its worthless character and grafted with Marie Louise d'Uccle, a young tree of which has fruited freely for the past six years. By grafting it on the French variety, this free-bearing trait has so far been entirely lost. Grafted in 1894, the tree has become quite equal in size to its original state, but no crop has been borne yet, and the spring of this year furnished but two or three flower-trusses. The tree, a vigorous one, was root-pruned to bring it into a normal state of growth two years after grafting, but this did not bring about the change usually obtained. Unless there are some prospects soon of fruit, re-grafting with another variety will be tried. No doubt the vigorous nature of the stock is too much for the precocious tendencies of the scions. It is not the soil that makes the difference, for the two trees are within 20 feet of each other. In the same border was a tree of Beurré Clairgeau that remained stationary in its growth for several years and had quite a stunted appearance. Instead of cutting it out I put on some grafts of Williams' Bon Chrétien to ascertain whether by re-grafting a new lease could not be given it. Results proved this to be so, and both growth and fruit now proceed quite satisfactorily. The fruit of the original B. Clairgeau was so small that it was useless for any purpose.

Another change brought about by grafting I once saw in the garden of a friend. In it was one particular tree that was not vigorous, but which ripened its foliage and crop very early in the autumn. It occurred to the gardener in charge that Doyenné Boussoch, a favourite variety with him, might be enhanced in its colour by uniting it to this slow-growing tree, and so it did. The fruit does not become so large as usual, but the bright flush extending over the whole surface of this Pear made it a most remarkable and striking dish for exhibition. I do not remember the variety on which it was grafted, but it was one that itself produced brightly coloured Pears, and the two were

allowed to grow together on the same stock. The broad foliage of the Doyenné Boussoch was distinctly conspicuous in its association with the narrower leafage of the foster-parent.

Other instances can be cited in which results do not always bear out one's expectations, but they afford interest all the same. Nurserymen in dealing with the many hundreds of varieties find that double-grafting is a great gain to increase in one or suppress in another growth which is not satisfactory treated in the ordinary manner. I have seen buds inserted in the main branches of young Apples trees remain dormant for more than eighteen months, simply because the branches were not shortened back to the buds after they became united. On this being done the bud immediately showed signs of activity, and eventually developed an unusually strong shoot. W. S.

Wills.

LOOSE VERSUS SOLID VINE BORDERS.

THAT is an interesting article by "H. R." (page 2) on Vine borders. There is much truth in his remarks on what the constituent parts of a Vine border ought to be. "H. R.," however, does not say anything about firmness, which I consider so essential in all well-made Vine borders. If sufficient opening material such as that described by "H. R." is used, the compost may be rendered solid and yet perfect drainage exist. Formerly gardeners seemed to favour loose Vine borders, and I have known newly-made borders to be turned over with five-tined forks so that they should lie loosely, but of late years very firm borders have found favour with some of the most successful growers, and I must say I think the idea is correct. A market-growing friend of mine in Derbyshire, who grew grand Grapes, planted two houses with Vines. The border of one was left in a loose condition, that of the other being made as firm as possible. A moderate layer of compost was laid on at a time, this being rolled with the garden roller. The soil was wheeled in in a semi-dry condition, and by the time the border was completed it was as hard as a road. My friend, of course, took the precaution to incorporate a good percentage of old mortar rubble, charred wood, and similar material. The Vines were planted in the same way and had exactly similar treatment in both houses, but there was no comparison between the weight and quality of the crops. The wood on the Vines in the firm border was much the harder and ripened sooner and better, and the bunches larger and finer in every way. When the last layer of soil was rolled, the surface was slightly pricked over with a five-tined fork to allow of a free and even entrance of water. Where the garden roller cannot be used, an equal solidity could be secured by other means. In planting Vines in these hard borders there is no necessity for disentangling the roots, as the water cannot pass down by the side of the balls without entering it, as in the case of loose borders. C. N.

Summer pruning of Peach trees.—I attach much importance to the late summer pruning of these. Of course, with early and late kinds the dates will differ as regards the time to do the work, but there can be no doubt as to its utility with trees in a vigorous state, especially those that have filled their allotted space and cannot be given extension. The result of summer pruning is seen at a glance, as by the removal of old, useless wood there is room to lay in fruiting wood for another season. This wood gets well matured, an important point, and one that should not be overlooked. To old, worn-out trees my remarks are not applicable, as often the wood on such trees is poor and none too thick. I have referred to extension, and I am much in its favour, but at times it happens that young trees have filled their allotted wall space. Much may be done by cutting out at this season and laying

in a stock of good wood. By doing this work now the trees benefit greatly and there is little to do in the winter.—G. W. S.

Summer pruning of Raspberries in dry seasons.—In hot, dry summers pruning now is beneficial, as with so little rain it is important that the new canes get as much moisture and light as possible to perfect their growth, as upon these depends next season's crop. I am aware some growers object to prune at this season, the reason being the old canes have not done their work, but my contention is that there is a great drain on the plants after having given a crop, and then to furnish the new canes for another year any assistance is beneficial. The old canes draw moisture away from the new ones and also obstruct growth by crowding them. I fail to see of what use they are, and in gardens where high culture is given to get fine fruit and in quantities, my advice is to remove the old canes as soon as the fruit is cleared. If this work is done early a much better growth will be secured. At the same time it is well not to allow all the shoots that show to remain. I prefer to leave three to a stool. Some leave more, but a great deal depends upon the soil and the culture given—variety also, as some kinds are much stronger than others.—G. W.

THE SAND CHERRY AS A STOCK.

HAVE any experiments been made in England with *Prunus pumila* and *P. Besseyi* as a stock for the Plum, Peach and Apricot? In experiments at the Iowa and South Dakota Agricultural Colleges this Sand Cherry, as it is popularly called, makes a good budding and grafting dwarf stock for our native Plum (*Prunus americana*) and for Japanese Plums and to a less degree for the European Plums. Peaches also do well on it. Cherries unite with difficulty. The Sand Cherry, a dwarf bush 4 feet to 5 feet in height, is a native of South Dakota and the North-west. It endured 40° below zero F. last winter on the college grounds at Brookings and is bearing a heavy crop of fruit this year. Native Plums blossom freely on this stock at two years, and some when one year of age. Flowering Almonds do well on Sand Cherry, I am informed by a Minnesota nurseryman. Japanese Plums make a strong growth and blossom very early. The experiments so far show that early fruiting is caused by this stock, but the tree is dwarfed. The stock will not sucker, although roots when much cut by the cultivator will sucker occasionally. The need of a hardy stock for the North-west may be inferred from the fact that Myrobalan, St. Julien, Marianna, and Chickasaw Plum roots, also those of Apricot and Peach, are all killed in our winters, leaving the hardy native Plum top, such as De Soto, Forest Garden, Rollingsstone and Hawkeye, to die. The past winter has caused widespread havoc in North-western prairie nurseries in this line. The only stocks that are sufficiently hardy appear to be the native *Prunus americana* and the Sand Cherry. For the culture of stone fruits this stock certainly deserves a trial. It grows very readily from seed and from layers.

At Brookings we are now selecting the best for fruit from nearly five thousand plants, and hope to develop something of promise from the seedlings. The plants bear at two years of age and endure the severest drought. This is to be expected, as these plants come from the dry, sandy prairies of North-western Nebraska and South Dakota. The plant varies according to its habitat in hardiness and drought-resisting capacity. The fruit varies much in size, being often nearly as large as the Early Richmond Cherry, mostly black, sometimes brownish red or yellow, and generally bitter. Occasion-

ally plants are found bearing fruit with scarcely a trace of bitterness. At Brookings we already have several thousand plants growing from seed of these selected plants, and are prepared to fruit 100,000 in the next few years if necessary to get the ideal plant we want.

Professor Saunders, director of the Canadian Experiment Stations, has been working in this line for several years, and has already several varieties named and under propagation. The field is one of much promise.

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OPEN-AIR FIGS.

I WAS pleased to note in Mr. Parker's remarks on the fruit crops that open-air Figs even in standard form were carrying good crops of fine fruit. I think I remember him telling me that the fine, but in the majority of instances shy-bearing Castle Kennedy grew and cropped well as a standard at Goodwood. No doubt the soil and general surroundings favour Fig culture in that garden, but I feel confident that, were a little more care and labour bestowed on the trees, Fig culture in the open, at least on walls, might be made tolerably easy and fair crops certain. Many, I believe, of the fine old trees planted by our forefathers in the more favoured countries never rallied from the terrible crippling they received from the frost in January, 1895. Had sufficient protection been afforded all would have been well, but many were left entirely to the mercy of the weather and others merely encased with ordinary garden mats, whereas dry Bracken should be freely distributed over the branches previous to the mats or bags being fastened on. Probably more exposed standards are harder than trees on walls, but it would be interesting to learn from Mr. Parker if the fine old trees at Goodwood received any covering. Many present-day gardeners appear to think outdoor Figs not worth troubling about when they can so easily be produced under glass, but even from an ornamental point of view they surely merit attention, while I maintain, and I know many more will do the same, that well-grown open-air Brown Turkey or Brunswick Figs have no equal in point of size, appearance, and flavour. Well do I remember the fine specimens of these two varieties my father used to grow in Essex, the making of muslin bags and enveloping the Figs being quite an undertaking. But, even where good trees exist, they are sometimes allowed to grow from year to year unthinned till the wood forms a perfect thicket, defying entrance to sunlight and air, laying in the young growths also being ignored. There is no wonder that they come to be deemed unprofitable. Only a few days ago I saw two fine healthy trees growing against a sheltered wall of a villa residence near Norwich, and there can be no doubt that perfect shelter is indispensable in the culture of outdoor Figs. In planting, two very important points to be observed are perfect drainage and a confined root-run. If this be neglected, gross shoots, barrenness, and disappointment are sure to follow. A rich larder to start with is likewise fatal, this being the rock on which many planters founder—a medium loam and ordinary garden soil in equal proportions, with a free admixture of old mortar rubble as a corrective, suiting best. If planting on a wall, choose either a south or south-west corner, and keep the roots within bounds for a few years at any rate by slabs or brickwork, making sure that provision is made for the escape of superfluous water. Raising the bed intended for the roots a foot above the ordinary level is likewise a good plan, and this is easily done. This encourages the formation of a colony of fibrous roots. Figs more than many fruits are prone to make a far greater percentage of shoots than can be properly exposed to the influence of sunlight and air; therefore early disbudding should be practised—midsummer and autumn laying in of the wood also being impera-

tive. Nothing responds more readily to a surface mulch of old Mushroom manure than the roots of Figs, colonies of fresh fibres soon running into it, these being further benefited by an annual top-dressing of loam and lime rubbish. I am confident that were the above details regularly attended to, remunerative crops of fruit might be secured. At the beginning of December provision must be made for protecting the trees from frost. Various means will suggest themselves to the cultivator, but nothing, I think, surpasses common Bracken in a dry state, kept in position by ordinary garden mats. The wood of well-cared-for trees should have been well matured last autumn, and except on uncovered trees which were injured by the frost late in March, fruit ought to be plentiful this season. NORFOLK.

Ripening young pot Vines.—"Cornubian," in his practical calendar notes on pot Vines, refers to the fact that some growers now-a-days leave the Vines in the pit or house where growth has been made "to mature." Although I do not see that there is any advantage beyond saving labour in average seasons, it is decidedly a gain when the autumn turns out wet, as, even though rain-water be prevented from entering the pots by slate coverings, as suggested by "Cornubian," yet the atmosphere cannot be controlled, and over-moistness retards ripening and encourages late lateral growth. In fine autumns the foot of a south wall is about as good a position as the Vines can occupy. No doubt, as "Cornubian" says, it is a bad plan to withhold root moisture too suddenly and early, such treatment having an injurious effect on the eyes which are to produce bunches next year. A gradual diminution is what is wanted, no further supplies of manure water being given after the above stage is reached.—B. S. N.

Bees and wasps.—Although perhaps rather early to write definitely on the subject, wasps are so far very scarce, and it is to be hoped they will continue so. Up to the present I have heard of but two nests having been found in this district, and the insects in both cases were weak and have since dwindled away. They should be scarce, as I have directed a rather merciless crusade against them the past three seasons, during which time a grand total of 302 nests has been destroyed. With regard to bees, these are inflicting more damage than ever, especially among Apricots, while Raspberries have also been badly attacked by them. I am trapping great numbers by means of bottles filled with cider and sugar and the old-fashioned device of placing handlights one on top of the other. Large quantities of bees, however remunerative they may be to their owners, are certainly a great nuisance to the fruit grower, as flies, wasps, and birds are quite sufficient to contend against without bees being added to the list. Some people will not believe that bees do any harm, but anyone calling here while Apricots remain ripe on the trees can see for himself that they, when present in large numbers, are far more destructive than wasps.—A. W.

Plum Early Violet.—In all the reports of the fruit crops which have from time to time appeared in THE GARDEN I do not remember to have once seen the above Plum mentioned. Several years ago I had occasion to write about it, and mentioned that the midland counties were the only ones in which I knew it to abound. I think it was Mr. D. T. Fish who replied, stating that the variety in question was propagated somewhat largely in Huntingdon nurseries. Mr. Fish also corroborated my statement as regards the usefulness of Early Violet. I have lately been reminded of it by seeing fine samples of it in the Norwich fruiterers' shops. Upon inquiring I find it has been pretty freely planted in some districts in East Anglia, and that, as in the midlands, it grows and crops freely. In size and even appearance it resembles Early Rivers, but is not, like that variety, considered a dessert Plum. All the same, it is in great request for cooking and makes a fine preserve.—NORWICH.

TREES AND SHRUBS.

CARAGANAS.

COMPARED with some, or indeed most, of the hardy leguminiferous shrubs, the Caraganas cannot be put in the first rank as regards showiness, and this is, perhaps, the reason why so little is said or written about them. As in most other genera, the species are not all of equal merit, but the best of them are decidedly worth a place in the garden either for the beauty and abundance of their flowers, or because of their quaint and graceful habit. Others, like *C. jubata*, if not exactly beautiful in the common acceptation of the word, may at least claim notice as interesting plants; they represent a type of shrubby vegetation characteristic of desert regions which in the nature of things cannot be very

odd or terminal leaflet is wanting. In most instances the leaf-stalk ends instead in a sharp point. The stipules, too, are spine-tipped, and they (as well as the leaf-stalks in some species) remain on the branches after the green blades of the leaflets have fallen and become hardened into ordinary woody spines. This is a curious and somewhat unusual adaptation of these organs to serve the purpose of arming and protecting the plants. The flowers are always solitary on the stalks, papilionaceous, and nearly always yellow. Most of the species ripen seed in this country, by which means they can be increased, as also by cuttings and layers. They are usually, however, grafted on *C. arborescens*.

Some of the Caraganas, as, for instance, the one now figured, make a striking feature planted singly on a lawn. Others, like *C. pygmaea* and *C. aurantiaca*, are better in groups. To those

it was introduced in 1752. In a wild state it is found in localities of varying fertility, and in the more favourable ones is often tree-like, and attains a stature of 15 feet to 20 feet. It reaches the same size in cultivated ground. The leaves are composed of six to eight pairs of leaflets, the stalk ending in a small spine and having also two others at the base, the latter being really stipules. The flowers appear in May and are bright yellow. They are borne singly on slender stalks about 1 inch long, several of which come from each joint of the previous year's wood.

C. A. VAR. NANA is a dwarf shrub compared with the type, its branches being stunted and gnarled. It grows slowly in height, and can thus be grown in places too restricted for the larger-growing varieties. In its flowers and leaves it does not differ from the type.

C. A. VAR. PENDULA is a weeping sort, and perhaps the most pleasing of the varieties of this species. It should be grafted on high standards of the ordinary *C. arborescens*, as its branches grow almost vertically downwards. It flowers, perhaps, even more freely than the type. Some nurseries grow it as *C. japonica pendula*.

C. A. VAR. REDOWSKI, of which an illustration is now given, is a plant of remarkable habit. Its branches are long and serpentine, dividing but little. A shoot will grow for several years without branching. This gives the shrub a curious and interesting, but still graceful aspect. Of this and of its free-flowering nature the accompanying picture of a specimen at Kew will be sufficient evidence. This plant is about 10 feet high and 18 feet across, but in habit, of course, quite thin and open. The flower is identical with that of the typical *C. arborescens*, and so is the leaf. I do not know whether it will come true from seed, but it is easily grafted on *C. arborescens*, or, still better, layered.

C. AURANTIACA.—Nearly allied to *C. pygmaea* and at one time considered a variety of it, this is now regarded as a distinct species by the German authority Koehne. It is the last addition made to the genus, and was put into commerce by Dr. Dieck. It grows some 3 feet or 4 feet high, and although erect when young, the branches become straggling and pendulous (even prostrate) with age. The leaves consist of four small, linear, pointed leaflets, and appear in the axils of a triple spine, which is really a modified leaf-stalk and its pair of stipules. The flowers are pendent and hang in profusion in a long row from the previous season's growth. Like those of *C. pygmaea* in size and shape, they differ in their deeper, more orange-yellow colour. They also come a week or two earlier. The botanical distinctions between the two species consist chiefly in the calyx of *C. aurantiaca* being larger and more conspicuously lobed and in the leaflets being more pointed. It is a native of Central Asia.

C. CHAMLAGU.—In foliage this is one of the best furnished and handsomest of the Caraganas. The leaves consist of two pairs of leaflets, which are obovate, smooth, and from half an inch to 1½ inches long. In all the other cultivated Caraganas the foliage is of a dull or even greyish green, but in this it is dark and glossy. The terminal pair of leaflets is the larger. The plant grows probably about 3 feet to 4 feet high in a natural state, but I have not seen it on its own roots. It appears to be always grafted on *C. arborescens*, and on standards about 5 feet high it certainly makes a handsome specimen, the branches being drooping and the habit more bushy and luxuriant than is common to this genus. The flowers are solitary on each stalk, of large size (for this genus), and yellow, acquiring a reddish tinge with age. It was introduced from China in 1773, and is a native also of Japan.

C. FRUTESCENS.—If not so well known as *C. arborescens*, this has at least been grown in gardens for an equal length of time. Both species were introduced to Britain in 1752. It is quite distinct from *C. arborescens* by reason of its leaves invariably consisting of but four (two pairs of) leaflets. These are (in the type) obovate, from half an inch to 1½ inches long, smooth, and dull



Caragana arborescens var. *Redowski* in the Royal Gardens, Kew. From a photograph by G. Champion.

abundantly represented out-of-doors in this country. The Caraganas have, however, other virtues to recommend them. They are perfectly hardy and (with the exception of *C. jubata*) easy to accommodate; they are, moreover, well adapted for poor soils, thriving where many other things would starve. The name Caragana is derived from Caragan, the native name for *C. arborescens* among the inhabitants of Mongolia. Although the species are comparatively few—about fifteen—the Caragana region fills the centre of the great terrestrial mass of the Old World. Stretching from the Black Sea and the Caucasus in the west, it reaches to China and Japan in the far east, and from the Himalaya and Afghanistan in the south, it extends northwards to the middle latitudes of Siberia. All the Caraganas are deciduous and the leaves (in the cultivated species) are equally pinnate—that is, the usual

who have not the space or desire to grow the whole of the species and varieties here mentioned, those marked * in the following list may be recommended as a selection of the best.

I.—SPECIES WITH FOUR LEAFLETS.

* <i>Aurantiaca</i>	<i>Chamlagu</i> (syn., <i>ch.</i> <i>nensis</i>)
* <i>Frutescens</i>	* <i>Pygmaea</i>

II.—SPECIES WITH MORE THAN FOUR LEAFLETS.

<i>Arborescens</i>	<i>Jubata</i>
var. <i>nana</i>	<i>Microphylla</i> (syn., <i>Alt.</i> <i>agana</i>)
*var. <i>pendula</i>	<i>Spinosa</i>
*var. <i>Redowski</i>	

C. ARBORESCENS.—This species, with its varieties, is the chief representative of the genus in gardens. It is the tallest and most robust of all the Caraganas and is well worth growing, especially in its pendulous forms. A native of Siberia,

dark green. The flowers are bright yellow, and are often borne in great abundance during April and May. The shrub itself is some 7 feet or 8 feet high and of moderately erect habit (the other Caraganas with four-parted leaves are all distinct from this in their pendulous, low habit). A native of Central Asia, and reaching from South Russia to Japan and China.

C. F. VAR. ANGUSTIFOLIA is very distinct in its leaves, the four leaflets of which are narrow and wedge-shaped at the base, whilst the apex (which in the type is broad and rounded) here tapers to a point. Originally found near Odessa, in South Russia.

C. JUBATA.—Being the most singular-looking of all the species, this is worth growing as a curiosity. The branches appear to the eye a confused mass of leaflets, spines and woolly hairs. The bark also is woolly and the stipules bristly. The leaf-stalks have spiny tips, and persisting after the leaflets have fallen, they become transformed into slender spines, which remain on the plant for some years. It does not make any show in flower, the blossoms being few and white, tinged with red. They appear in April and May. First introduced in 1796 from the region of Lake Baikal, in Siberia, it has since been found much further south in Mongolia, and even Afghanistan. It is a dwarf shrub, 1 foot to 2 feet high, and inhabits desert regions. Like some other shrubs that grow wild under similar conditions, it is not easy to rear from seed and grow on its own roots in the open ground. It thrives, however, at the base of a dry, warm wall. Plants intended to be grown without this protection may be grafted on *C. arborescens*.

C. MICROPHYLLA.—In this species the leaves are composed of some six or eight pairs of leaflets, and these leaflets furnish a distinguishing character in being, as the name suggests, smaller than those of any other species. They average about a quarter of an inch in length, are of elliptical outline, and a grey-green colour. The shrub itself grows 6 feet or so high, is wider than it is high, but still of graceful habit, the growths being long, slender, and but little branched. The yellow flowers appear in May, but so far as I have seen make but a meagre display. A native of the Central Asiatic region from Altai and Dauria eastwards to China, &c. Introduced in 1752.

C. PYGMEA.—Although scarcely a pigmy, for under cultivation at least it is 3 feet high, this is still one of the dwarfiest of Caraganas. It is really a pretty shrub when well in flower, especially after such hot summers as those we have lately had in this country. It has a straggling, rather thin habit, the branches being long, slender, and half-pendulous. The leaves appear to be arranged at each joint in fascicles of four or eight, but there are really only one or two leaves, each consisting of four small, narrow leaflets half an inch or so long, and the stalks so short as to be scarcely discernible. The flowers are pendent and hang in long horizontal rows from the branches; they are a clear yellow, and appear in May and June. Nearly related and very similar to *C. aurantiaca* when out of flower, this can be distinguished by characters pointed out under that species. It is a native of Central Asia, and reaches from the Caucasus to the Himalaya and the Altai Mountains. Introduced in 1751.

C. SPINOSA.—Next to *C. jubata* this is the best armed of the Caraganas in cultivation. The leaves consist of two or three (occasionally four) pairs of narrow, wedge-shaped leaflets each half an inch to three-quarters of an inch long, and not averaging more than one-eighth of an inch in width. The most noteworthy character of the leaf is the stalk. This is stiff, and stands out beyond the terminal pair of leaflets in the form of a sharp spine. After the leaflets have fallen, this woody, spine-tipped leaf-stalk still remains to arm the plant. The shrub is 4 feet to 6 feet high, and has long, thin, crooked branches. The flowers are bright yellow. A native of Siberia. Pallas, the Russian botanist, observes that this Caragana is plentiful about Pekin, and that its branches are stuck in clay on the tops of walls to keep off would-be trespassers

—just as broken glass is used here. It does not, however, appear to be a native of China—at least Mr. Hemsley does not include it in his "Index Floræ Sinensis." W. J. BEAN.
Arboretum, Kew.

THE WEEPING ASH.

(*FRAXINUS EXCELSIOR VAR. PENDULA*.)

THE common Ash is one of the most distinct and graceful, as also one of the most useful of all our native trees after the Oak, which, of course, has long held the first place in our national history. The Weeping Ash is merely a weeping form of the type, occurring naturally or by chance here and there both in England and Ireland, and probably elsewhere. The weeping variety appears to have become popular as a grafted plant in gardens towards the end of the last century, and one of the oldest, or at any rate largest and finest, specimens I ever saw is, or was, at Elvaston Castle, near Derby. There are also some very tall and remarkable grafted specimens at Castlewellan, Co. Down, and elsewhere in Ireland. In reading the other day a rather rare old book entitled "A Narrative of a Residence in Ireland," by Mrs. Anne Plumtree, a quarto, published in London in 1817, I found on pp. 92, 93, and part of 94 the following account of the original tree in England, as also of others she saw in Ireland about the date mentioned, an account so interesting to all who are fond of ornamental native trees that no apology is needed for introducing it here, especially as but few people now-a-days have a chance of seeing the book from which the extract is made. It would be interesting to know if the original tree at Gamlingay, near Wimpole, Cambridgeshire, still exists, and its present state of health and dimensions.

Between Lurgan Green and Dundalk my attention was arrested by seeing in a hedgerow, among a number of Ash trees with which it was interspersed, two of the kind now well known in England as the Weeping Ash. One of these was of a great height, and was evidently a tree of many years' growth. It must have been much, much more ancient than the date when these trees came into general notice in this country. It had, however, been stripped of its long branches, and only a few young shoots were now growing from the top. The other was of a considerable size, larger than any I ever saw in England, the parent stock excepted. It is remarkable that this tree, now to be seen in almost all plantations, was scarcely known till within somewhat more than the last thirty years. At that time the existence of the parent tree, though then of a great age, was known to very few. Chance led to my becoming acquainted with it. It stands in the village of Gamlingay, near Wimpole, in the county of Cambridge, where a woman, who had been servant in my father's family, went to live with her husband. Seeing this woman occasionally, she talked to us very much of a great curiosity in their village, a Weeping Ash tree, and one day when some of the family were at the village, she took us to see it. It was then in a field close by a farmhouse, a large forest tree, the trunk growing to a great height, quite straight, without a shoot, and from the head the long branches hung sweeping to the ground, forming a perfect arbour within; it did indeed appear to us a great curiosity. She said that her husband had taken some grafts from it, which he had grafted upon common Ash stocks, and if the experiment should succeed she would request my father's acceptance of one. In due time one was brought and presented to him at his living of Wimpole, in Cambridge, and the man having been servant in Lord Hardwicke's family, another was presented to his lordship's steward to be planted in the grounds. These I have good reason to think were the first two known out of Gamlingay.

Since that time the breed has spread very much; but I believe it may with truth be affirmed that all are descendants in a direct or remote line from the same parent. The dispersion of the family has brought the parent into more notice, and occasioned investigations to ascertain if possible its origin and age; but the oldest people in the place, one man eighty-eight years of age, could only say that he remembered the tree ever since he was a boy and always a large and well-grown one. The last time I saw it was about three years ago. A very neat, small house had been built close by it, where lived the curate of the parish, and the tree was enclosed in his garden; he had rescued it from the axe, to which it had been sacrilegiously doomed. It was not in so great beauty as when I first knew it; one side had suffered exceedingly in a hard winter, and so much had died, that on that side the arbour was quite laid open; on the other side the branches hung with as fine and majestic a sweep as ever. A remarkable thing is that if the seeds of this tree are sown they come up common Ash trees; the only way of propagating the species is by grafts. The same casualty that first produced this tree must probably have operated to produce those in the hedgerow on the Dundalk road, but no such chance as that I have mentioned ever drew these into the same notice; they seem to stand here wholly unheeded. F. W. B.

ORCHIDS.

PESCATOREA CERINA.

WHEN well grown and flowered this is one of the most charming Orchids in the section to which it belongs, and though considerable care is undoubtedly required in its cultivation, there is no reason why it should not be included in every amateur's collection. From a tufted mass of leaves the flower-scapes are thrown up and each bears a single blossom about 3 inches across, pale yellow, with a circular crest to the lip, which is marked with brown and purple lines. When commencing their culture a little thought should be given to the habit of the plants. They are quite bulbous, and an examination of newly-imported specimens will show that they do not grow naturally where there is any great accumulation of *débris*, but rather on the bare portion of a tree branch or on the face of Lichen-covered rocks. These circumstances point to a thin compost being needed, and the absence of pseudo-bulbs shows that they do not require any long season of dry rest. This has proved to be the case under cultivation, but still the roots require a good deal of sustenance, and anything like bare block treatment will not do. The compost most likely to suit them is one that allows of frequent moistening without any danger of souring, and that holds moisture enough for the needs of the plants, but not to excess. Fibrous peat and fresh Sphagnum, with large lumps of charcoal and ballast, do this, and only about an inch of this is necessary for small plants, larger ones requiring a little more thickness. An important point, and one that in potting Orchids is too frequently lost sight of, is firming the plants so that they cannot sink. I have seen many plants of this and similar kinds looking very unhappy for this very reason. Spreading laterally as they do, the centre of the plant easily gets lower in the compost than it ought, and I have seen good results by fixing the plants to rough blocks of wood and placing these in pots, simply filling around them with the compost. As to temperature, the *Cattleya* or the East India house may be chosen, the latter if the *Cattleya* house is very large or light, as *Pescatoreas* like a snug, moist corner where actual sunlight never reaches them without, as it were, being filtered by the interposition of

other plants. A little consolidation is needed in autumn and just then a little more light than usual, a slightly drier atmosphere and more air may be given. Water in plenty is an absolute necessity to them while growing, and it is for this reason that the light make up of compost is safest, though I have seen loam used for them successfully. In winter when evaporation is slower less moisture is needed, but even then the roots must not be much dried.

H.

Chysis lævis.—This pretty plant I noticed in good condition recently, and it is one of the finest in the genus. The stems are pendent, and the young growths proceeding from them produce fine, handsome racemes with eight or nine flowers on each. The sepals and petals are orange-yellow, the lip yellow, with spots of crimson and a fine showy crest. *C. lævis* is a native of Mexico, and during the growing season delights in ample moisture and heat with cooler treatment during the resting season.—H.

Disa grandiflora Borrelli.—This variety differs from the typical *D. grandiflora* in having the sepals of a much brighter more scarlet tint, with a lighter tinted lip. It was introduced by Mr. W. Bull, of Chelsea, some years ago. The plant thrives under exactly the same conditions of culture as the type, and, like it, must be kept clean and free from thrips. Air and moisture, combined with a low temperature and shade whenever the sun is bright enough to harm the foliage, should be allowed; a rather loose, open compost of growing Sphagnum and peat fibre with ample moisture at the roots being also necessary.

Angræcum Scottianum.—This *Angræcum* is very distinct and worth a place in all collections. The stem and leaves are terete and the flower panicles bear but few blooms, these being yellowish-white in the sepals and petals, the lip pure white in front, the spur having a reddish tinge. *A. Scottianum* thrives in the hottest house in baskets or pans kept in a light position, and during the growing season the house should be reeking with moisture and the roots kept well supplied. It is a native of the Comoro Islands, and though very rare for some time after its introduction in 1878, it is now more generally grown.

Cypripedium Exul.—The flowers of this pretty species do not vary so much as those of *C. insigne*, which it much resembles both in habit and flower, but there is a certain amount of variation. At Ickworth there is now a very beautiful clear lemon-yellow form with few spots on the dorsal sepal, and these of a deep purple. It seems to bear the same resemblance to the type as the montanum varieties do to *C. insigne*. The great fault of *C. Exul* is its somewhat shy-flowering habit, and it is not at all unusual to see large well-grown plants with only one or two blooms. Anyone who has it flowering really well would be doing a favour by recording particulars of treatment followed.

Schomburgkia tibicinis.—Although in many cases this plant is not particularly free-flowering, it may usually be induced to throw up spikes by thoroughly ripening and hardening the growth and keeping the plants on the cool and dry side in winter. The plant in habit, manner of flowering, and the shape of the blossoms is a good deal like *Lælia superbiens*, to which it is doubtless nearly related. The roots are freely produced when the plants are healthy, and like a rough, open description of compost in rather large pots. The spikes rise in summer, and are apt to be covered with a gummy exudation, possibly a natural protection to the flowers from crawling insects that may affect their fertilisation.

Dendrobium nobile Cooksonianum.—Although this variety is very striking and effective it cannot in my opinion compare with many others for beauty. The dark blotches on the petals give the flower a rather heavy appearance that is

noticed more on a well-flowered stem than in individual blooms. The plant is fairly plentiful and easily obtained, and its culture does not differ in any material particular from that of the typical *D. nobile*. It originated as a sport in a north of England collection, and though fairly fixed will occasionally throw flowers out of character. Such a case I noted in a neighbouring collection recently, a fine stem carrying a score or more of true *Cooksonianum* flowers with a few smaller ones below, not exactly of the ordinary type, but quite distinct from the others, the segments having the normal position and being much lighter in colour.

Cymbidium eburneum.—There are a chasteness and purity of colour about this Orchid not seen in any other *Cymbidium*, and it deserves all its popularity. At first the habit is almost like that of a *Vanda* or *Aerides*, but eventually the stem



Stanhopea oculata.

thickens at the base into a stoutish pseudo-bulb. The lilac-scented blossoms occur upon erect spikes at the axils of the leaves and are ivory white with the exception of a few spots and a yellow stain on the lip. *C. eburneum* is one of the easiest of Orchids to grow, and though often found thriving in a cool house will not fall out with warmer treatment, provided it is accompanied by proper ventilation and ample atmospheric moisture. The practice of damping with soot or manure water instead of clear is especially helpful to these Orchids with large green leaves. The compost ought to be of a substantial quality, a good percentage of sound fibrous loam being mixed with the peat and moss. During the summer, healthy well-rooted specimens require a large amount of moisture, but in winter when comparatively speaking at rest much less suffices, though even then the roots must be kept moist.

STANHOPEA OCULATA.

THIS is certainly one of the finest of *Stanhopeas* and a very beautiful Orchid. It may be easily grown by anyone having plenty of heat at command and a moist atmosphere, this latter being particularly necessary on account of the plant being so liable to attacks of red spider. It does best suspended close up to the roof and lightly shaded, in which position the plants get hard and flower freely. If insects do attack them, they will not do so much harm as to plants growing in heavily shaded positions whose foliage is softer and more easily punctured. The wire basket has long been the favourite receptacle for *Stanhopeas*, and nothing that I know of is likely to supplant it. Well made, of good stout copper wire, with fairly large spaces between the wires, it is rigid and lasting, conducive to cleanliness and in all ways suitable. For compost use a little loam fibre and good clean Sphagnum Moss, placing large pieces of charcoal or crocks in the bottom and sides to facilitate the passage of the spikes. Water freely all the year round, sprinkling the foliage frequently with tepid water while growth is active. Though *S. oculata* is even now only occasionally met with, it has been in cultivation nearly three-quarters of a century, having been introduced in 1829.

H.

Masdevallia Carderi.—This species is very pretty when well grown, and quite distinct from any other known kind. The flowers are produced on semi-pendent spikes, and in colour are a pretty combination of yellow, white, and purple, the lip and petals being, as usual, inconspicuous. The plant does best in a basket suspended in the coolest house during the summer months where ample moisture is kept up in the atmosphere, and if in winter the temperature is kept up to 50° and ample light afforded, it may remain the whole year round.

Oncidium dasystyle.—This pretty little species I have noticed blooming freely this week, and the wonder is that it is not more grown by lovers of curious and pretty Orchids, for the flowers are both showy and interesting in structure. The peculiar likeness to the Bee Orchid is more apparent in some plants than others, the purple tint in the lip callus varying greatly. The spikes appear at the base of the last-formed bulb and bear several small yellow flowers with the purple marking described. It likes a position not far from the roof-glass, and the rooting medium should be free and open without being very extensive. Some growers do it well on blocks of Tree Fern. The intermediate house is best for it.

Stanhopea graveolens.—This is one of the prettiest of the *Stanhopeas*, and less common than most. I noticed a nice plant flowering recently, the scent from the flowers filling a large stove in which it was grown. The species is of vigorous growth, clean-looking, and with lighter pseudo-bulbs than usual, the colour of the blossoms a pretty light yellow on the sepals and petals, merging into a bright apricot-yellow on the lip. The blossoms occur on two or three-flowered scapes in the downward direction usual in the genus. A brisk moist heat, with ample light and not too frequent disturbance of the root, suits it best. *S. graveolens* is supposed to be of Guatemalan origin, the earliest record of its flowering being in 1840.—H.

Arpophyllum giganteum.—A well-flowered plant of this species is very ornamental, though quite different from the majority of Orchids. The flowers are borne on loose spikes and are rosy purple. So very free-flowering are the plants that large specimens bloom from every shoot, and a very handsome plant is thereby produced. Its culture is extremely easy, yet in many places the plants are almost killed by neglect. It grows naturally on trees in localities where collectors

state that the wind is extremely rough at times, yet the *Arpophyllums* thrive in the most exposed places. This shows that the roots are very strong, and it will be found under cultivation that growth is stronger when the latter are given a semi-terrestrial make-up of compost rather than a mixture such as suits epiphytal plants generally. The best place to grow the plants is on a light stage not far from the roof-glass in the *Cattleya* house. It does well when the top of the plant is within a foot or so of the roof, and needs very little shading. The *Cattleya* house is the best, but it is not a fastidious plant, and will often thrive in a vinery at work or in an ordinary stove. No drying off is necessary. A little pruning of the older stems improves the plant's appearance and allows the light to reach the young growths. Large pots are required for specimens, and these should have the drainage very carefully placed.

AUTUMN-FLOWERING ODONTOGLOSSUMS.

ALTHOUGH there are other kinds in this favourite genus that flower in the autumn, the section containing *O. grande*, *O. Insleayi* and similar kinds are those which are usually looked upon as autumn flowering. A strong family likeness runs through all these species, though each has its distinctive marks and its likes and dislikes. Taken all round, they are much the easiest of *Odontoglossums* to grow, and of *O. grande* I may say that the finest specimen I ever saw was grown in quite a mixed collection of greenhouse plants where no special attention was given to Orchids. For a cool fernery there is nothing among Orchids more suitable than these *Odontoglossums* and *Cymbidiums* of the giganteum and *Lowianum* types. Where even a fairly moist temperature is kept up in a greenhouse during winter, these plants may be turned out into a frame in the hottest summer months and successfully grown. It is no uncommon thing to see such kinds as *O. crispum* and the like advertised as plants for an amateur's greenhouse, easily grown in the greenhouse, &c., when everyone who knows them is perfectly well aware that without a house that is properly suited to their requirements the percentage of successes will be very low, and that an amateur's greenhouse as usually understood is about the last place where one would try to grow them.

The autumn-flowering kinds, on the other hand, are not so easily incommoded by slight deviations from the ideal treatment, and are far more likely to succeed under adverse conditions than those with which I have compared them. They have a beauty distinctly their own; the flowers are, of course, less chaste-looking than those of *O. crispum* and *O. Pescatorei*, but they are remarkably handsome and distinct from everything else in the floral world. They last even longer than those of the *crispum* set without injury to the plants, for though, as a matter of fact, the latter hang on the longest, it is at the expense of their own substance and the health of the plants. The former may be left on as long as they will last without any fear provided the plants are healthy and the roots kept moist. The best known kinds in this section are *O. grande*, *O. Insleayi*, and *O. Schleiperianum*, and if a good number of plants of these three and their varieties are grown, they will flower from August until quite late in spring. As mentioned above, they are not fastidious as to temperature or structure, but the conditions they like best are mentioned below, and these should be followed as nearly as possible. From the end of May until the beginning of September it is impossible in an ordinary summer to keep them too

cool and shady. The atmosphere should be heavy with moisture, and the plants screened from the sun from 8 o'clock in the morning until 6 at night. Night and day the air should be freely admitted—through the lower ventilators as much as possible—so that the leaves of the plants are often blown about by the air currents. This will ensure a good and clean start, and by the time the sun begins to lose power in autumn, the young growths on *O. grande* will be getting well away and probably beginning to show flower-spikes. Just where these show there are loose sheaths and the top of the growth may be open, so that water is apt to collect there. For this reason it will be safest to stop syringing overhead, though at almost any other time this is useful when the weather is bright. The pots used may be of fairly large size, as the roots are apt to push further from the centre of growth than are those of many other *Odontoglossums*, and the compost, too, should be very rough and open. Root moisture is necessary all the year round, the most being required just when the bulbs are finishing and the flowers forming. Good peat fibre, with half its bulk of *Sphagnum* Moss, is the best for these Orchids, and the drainage must in all cases be carefully attended to. As hinted above, there are many varieties of each of these species, *O. grande* having several that bear much larger blossoms than those of the type and of brighter colour. *O. Insleayi*, again, is variable, some of the forms being very cheap and easily obtained, while others are far from plentiful. *O. Schleiperianum* has many colour varieties, so there is no fear of sameness, and all are beautiful Orchids.

Warszewiczella Wendlandi.—In this we have one of the most attractive in the genus to which it belongs. The growth is fairly strong, and the flowers are each upwards of 3½ inches across, of a chalky white tint except the lip, which is prettily marked with a bluish purple. In positions where it succeeds nothing is prettier at this time of the year, but, having no pseudo-bulbs to sustain it during a period of rest, it naturally requires very judicious watering, more especially in winter. Again, with regard to the roots. I know of a collection where a large quantity of loam is used in the potting compost, and the way the white, fleshy roots luxuriate in it proves that it is just to their taste; but, again, unless a really vigorous root action takes place the loam would be simply poison to the roots. A strong plant enwraps the loam and the roots get the mastery of it, as it were, but a weak one would simply die from want of moisture or else be overcome by its closeness and the want of air. A little loam added to the usual peat and Moss will, as a rule, be safest and best for inexperienced growers to use, and the best position for the plants is one not far from the roof-glass in a shady, moist house with an intermediate temperature.

Dendrobium d'Albertisi.—None of the *Dendrobiums* with the habit of this species are easy to grow, and this is no exception to the rule, though one occasionally comes across good specimens of it. The plants like ample light, in this coming near the species of another section, like *D. Phalenopsis* or *D. bigibbum*. It is not so tall-growing as *D. stratiotes*, and this fits it better for basket culture, though when the plants are in flower they must come down. Over-watering at the roots during early summer is, I am convinced, a frequent cause of failure with this and many others of the section that do not, as a rule, make much root or top growth at that season, and if only growers would study their plants and take note of their peculiarities, instead of treating all alike, they would not be nearly so apt to fall into these mistakes. *D. d'Albertisi* is not particularly strong-rooting, and it is best when establishing

plants, to do so in as small baskets as possible. It is easy enough to shift this entire into one of a larger size, but when given too large a size at first, the plants often fail to establish themselves, as they cannot reach the sides. The flowers of this species have long, twisted, emerald-green petals, sepals pure white, and a white lip with magenta-purple markings.—H.

DENDROBIUM FORMOSUM.

IN spite of many different ways of treating this *Dendrobium*, very few growers can say they are really successful with it, and I am inclined to think that in many cases where the plants have gone on well for a time this has had more to do with the plants themselves than any special treatment to which they have been subjected. Plants collected at the proper time—and this, of course, varies with individual species—are always better the first season and longer-lived afterwards than are others that have been collected too early, *i.e.*, before the growths are properly finished, or too late. In the latter case the eyes at the base of the stems break into growth, and it is well known that secondary growths, or back-breaks as they are termed, never make such good progress as do the natural first-formed ones. This individual species does not usually arrive in bad condition, but, as is well known, it flowers at once upon the new growths when made, and in many cases the plants are collected before this happens, and the first thing they do is to flower. The fact of the flowers being produced and kept on until they fade before the plant has had time to establish itself is enough to account for the plant starting weakly and never again taking a proper hold of the block, basket, or whatever is used for it. The best plan I know of to establish *D. formosum* is to attach the plants to blocks of some kind and place these in a hot, moist house where they will obtain ample light. If flowers appear they should be rubbed off, and then the energies of the plant will be devoted to the production of good roots, which will establish the plant and strong young growths. Although the block treatment seems rather poor, perhaps, after the first season, I am of opinion that if only plenty of moisture is present in the atmosphere the plants are safer there than anywhere. On more than one occasion I have sunk the blocks in baskets or pots, filling up with compost, but I have nearly always found that after a year or two they go wrong, while others kept to the blocks alone keep going though the growths may not be so strong. *D. formosum* likes a good rest after flowering, but, unlike the deciduous kinds, it does not need to be placed in very cool quarters. There is no need, in fact, to remove it from the house where grown if other tropical Orchids are included. Although the flowers of *D. formosum* are useful for decoration, they are not so pretty as are those of many others in the genus, but they make a good display at rather a quiet time of year for Orchids. H. R.

Oncidium undulatum.—When well grown this is a very fine plant, and one that certainly should be included in all collections of cool-house Orchids. After the prevalent tint of yellow in the genus, beautiful as they all are, a change in colour is very welcome, and in this we get a very distinct one. The sepals are brown, the petals white, with brown markings, and the lip has a bright rosy purple tinge tipped with white. It is not uncommon for the spikes to attain 4 yards or more in length, and they have a very pretty effect if allowed to ramble somewhat loosely about the foliage and stems of Palms or Tree Ferns in the

conservatory. It will be necessary of course to see that they are not exhausted, as the long flower-spikes take many months to form and constitute a severe strain even upon the strongest plants. The roots of *O. undulatum* are large and vigorous, they seem to delight in rambling about over rough lumps of charcoal and crocks, so in preparing the compost, let these be in plenty and let the pots be large enough to take them easily. When repotting set the leads rather low to counteract the habit the plant has of rising above the compost. When the young roots appear from the base of the forming pseudo-bulbs, these should be covered up with a little fresh compost, or insects will probably find them out and eat the points before these reach the compost. It may be kept in the cool house all the year round and always moist at the roots.

Cattleya Whitei.—This is one of the most beautiful of the natural hybrid Cattleyas. It is always interesting to note an additional form of a scarce plant wherever it may make its appearance. *C. Whitei* has been for many years one of the rarest of the natural hybrid Cattleyas. The original plant was sent to Messrs. Hugh Low and Co. from Brazil by their collector White, who is said to have found it growing on the same tree as *C. labiata* Warneri and *C. Schilleriana*. This plant afterwards passed into Mr. Gaskell's collection, near Liverpool. The flowers were described by Reichenbach as being of medium size. A plant was recently noted in flower in the collection of Sir Frederick Wigan at Clare Lawn, East Sheen. The flowers measured upwards of 8 inches across the petals, each petal being upwards of 2 inches broad. The sepals are of a deep rosy purple suffused with a peculiar bronzy tint. The ground colour of the petals is similar to that of the sepals, with some white at the base, the whole surface heavily veined with a darker shade of purple. The lip is open in front, as in *C. Schilleriana*. The whole of the front lobe is bright crimson-purple with a heavily fringed margin, the side lobes rose-lilac tipped with the purple of the front lobe. At the base there is some yellow, which is suffused and longitudinally lined with brownish purple. The plant carrying a two-flowered raceme has the intermediate characteristics of *C. Schilleriana* and one of the *C. labiata* group. It may be noted that the plant differs not only in size, but also in the published description, from that of the original plant, but the general characteristics are undoubtedly the same. It is a grand addition to the Cattleya family, and it is to be regretted that such a fine plant does not appear more frequently.—H. J. C.

NOTES AND QUESTIONS.—ORCHIDS.

Odontoglossum hastilabium.—The flowers of this are quite distinct from those of any other *Odontoglossum*, and although it is not much grown at the present day, it is certainly worth a place in the best collections. From an almost spherical bulb it throws up spikes 4 feet and upwards in length, and these continue in flower a long time owing to the blossoms not opening simultaneously. The sepals and petals are greenish white, barred with purple, the lip white, stained with purple-rose.

Zygopetalum Mackayi.—There are some really fine specimens of this useful winter-flowering Orchid in Colonel Heyworth's garden at Chadacre Hall, the pseudo-bulbs finishing up of immense size and flowering with freedom annually. There is no doubt that, in common with several other old-fashioned Orchids, this is more frequently met with in good condition in places where no particular attention is paid to Orchids and where they are grown in plant stoves than where Orchids are specially cultivated.

Masdevallia infracta.—This is a singularly formed and very pretty species, the tube and sepals varying in colour from yellowish and white to purple. It is quite distinct from any of those of the showy flowered kinds, like *M. Harryana* and its allies, and is not much grown. It is a Brazilian species, and is therefore found a long way from the usual *Masdevallia* country, and, like one or two others, it likes a temperature a little higher than the coolest house in winter, with the freest ventilation possible under the circum-

stances and ample light. In summer it can hardly be kept too cool, and must be screened from the sun.

Masdevallia leontoglossa.—To lovers of quaintly formed and coloured species this singular and rare species will appeal. It is named from a likeness which the lip undoubtedly bears to the tongue of some of the large quadrupeds. The leaves are about 6 inches high and the flowers of mostly a pale yellowish green, with more or less confluent spots of purple on the lower sepals, the upper triangular segment lined with rosy purple. About the lip are many short hair-like papillae of a deep port wine colour.

Lælia elegans Mastersi.—In this variety, which is one of the prettiest of the light forms, the sepals and petals are nearly pure white, with a faint streak of rose only at the base of each. The lip is margined on the side lobes with violet-purple, which, in addition to the usual bright blotch in front, gives the flower a distinct appearance, the colour-marking being so well defined. *Lælia elegans* in its many forms is one of the most useful of Orchids, and it certainly keeps up a longer display than almost any other.

Cattleya guttata Leopoldi.—Occasionally plants of this species throw up remarkably fine spikes of bloom, and when they do so there are few finer kinds in the section to which it belongs. The growth is erect and forms quickly, and the spikes often contain eighteen or twenty flowers. The sepals and petals are brownish green, with crimson spots, and the lip is broad and handsome, bright amethyst-purple. It flowers at once upon the newly-forming stems, and should, if possible, be kept at rest after the flowers are past.

Epidendrum aurantiacum.—In habit this plant closely resembles a Cattleya, and under cultivation it will be found to thrive if treated as advised for these plants. The flowers appear from the apex of the last-formed pseudo-bulb, on peduncles containing about twelve. They are small individually, but very bright and pretty, the colour orange-red, with a few greenish yellow markings. *E. aurantiacum* is a strong-rooted plant, and if grown to a fairly large size should have abundant drainage, as well as rough lumps of crocks and charcoal in the compost.

Oncidium maculatum.—Once very popular this old species is now very seldom met with. The branching spikes rise about 18 inches high and contain a large number of flowers, each about 2 inches across. Very variable in its markings, it is usually some tint of yellow or greenish yellow in ground colour, more or less closely covered with chocolate-brown spots. The plants should be grown in a free, open compost in the coolest part of the Cattleya house or with the Mexican *Lælia*. Plenty of water is necessary while the growth is active, occasional light syringings being helpful.

Dendrochilum filiforme.—Those who have nice specimens of this pretty Orchid now in flower should be careful not to have them checked by being placed about in draughty passages or rooms, or by being dried at the roots. The pseudo-bulbs at the time of flowering are only partially grown, and any check in the nature indicated will of a necessity show itself in small bulbs and weak flower-spikes another year. Very pretty are these little spikes of yellow blossoms, and from their appearance when in bloom, the plant has been called the Golden Chain Orchid. The best position for it is one close to the roof glass in a warm house.

A NOTE FROM MUNCHES, DALBEATTIE, N.B.

LYING in a mild corner of S.W. Kirkcudbrightshire, near the Solway, and in a mild and equable climate, Munches, the estate of Mr. Wellwood H. Maxwell, has long been known for its trees, shrubs, and flowers. In the course of a long and busy life Mr. Maxwell has always had a keen interest in plants, and the result is now to be seen in the extensive and varied collection which I had recently the pleasure of visiting. Possibly only an expert in trees could do justice to the trees and shrubs, but anyone to whom gardens are familiar could not but feel keen pleasure in the many beautiful specimens to be seen. Many shrubs seen, as a rule, of small size have been so long at Munches that they have attained large dimensions and show their true character. Notable among these are some superb *Retinosporas*, justly pointed out with pride. *Sciadopitys verticillata*, the Umbrella Pine, twenty-five years

planted, is now 15 feet high, and flourishes in the peaty soil in which it is grown. *Cryptomeria japonica elegans* is very beautiful also. Very beautiful also was a good specimen of the white Douglas Fir (*Abies Douglasi* Stairi), raised originally at Castle Kennedy. It is rare, but, as Mr. Maxwell said, need not be so little seen, as a large proportion of seedlings comes true. Fine also was *Picea Engelmanni*. Some noble specimens of *Wellingtonia gigantea* gave one much pleasure, while a magnificent Scotch Fir of great age could not fail to impress one with its rude grandeur. There are many beautiful conifers, to which only the pen of a specialist could do justice.

Among the noteworthy things are the Maples. Many forms of the Acer are represented, and the collection is especially rich in the Japanese Maples. Some were imported direct from Japan, and a number have now attained a good size, so that their beauty can be more fully realised. The silver variegated Maple (*A. Negundo argenteum variegatum*) is represented by two of the tallest specimens I have ever seen. Space will not permit of further reference to the trees and shrubs save a passing mention of the Cornuses, *Viburnums*, Birches, and to the fine masses of *Parrotia persica*, beginning to colour for the autumn. The collection is particularly rich in variegated, dark-leaved, and weeping forms of the various trees.

The glass structures are particularly interesting to those who care for out-of-the-way plants such as one does not, as a rule, see outside botanic gardens. There are numerous out-of-the-way flowering, fine-foliaged, and fruiting plants such as would take long to see and to write of. I observed the fine *Datura Knighti* on the roof of one of the houses with an *Ipomoea*, which appears to be *I. Leari*. It would, however, take too long to comment upon a collection which includes not only old and generally neglected plants, but such as the recent *Acalypha Sanderi*. Indoor and outdoor fruit was plentiful and generally good, pleasing features being the Pears in the orchard house, the Guavas, the edible Passion Flower, the Capo Gooseberry, and a capital crop of Grapes.

The flower garden gives as much evidence of catholicity of taste as the houses. A small garden which occupies the site of the old house of Munches is planted with a good variety of herbaceous plants, supplemented in autumn with annuals. As is general in the district, the hardy annuals are poor, and they are much missed. Among the flowers grown are *Alstroemeria chilensis* and *A. aurantiaca*, which do well. *Delphiniums*, *Campanulas*, *Poppies*, and other border flowers of merit share with choice and pretty shrubs this small garden.

In the large garden one saw many Cactus and single Dahlias, some capital Asters (a little smaller than usual on account of the drought), good Stocks, and a number of Gaillardias. Carnations do not succeed well, but the Margaret Carnations take the place of the more highly prized named varieties. Sweet Peas were good in an open portion of the garden, but nearer the walls they were not so satisfactory. Among the perennial plants was *Gentiana lutea*, which had given a grand spike of flower several feet high and was in seed. It is, as is commonly the case, a shy bloomer at Munches. *Rudbeckia laciniata* Golden Glow was represented by a fine plant, and in the woods *Veratrum* were giving good spikes and blooming freely. *Gazania* were glowing in the sun, and a group of *Crozy's Cannas* was finely in flower. Perhaps the most interesting thing to a hardy plantsman was, however, a line of ten or a dozen plants of *Incarvillea Delavayi*. Raised from seed sown about five years ago, they seem to be yearly increasing in size and vigour. The plants have this year given an average of four spikes each. The bloom was over and the plants were in seed. A spike I measured was 52 inches long, and one can understand how well worth seeing these plants must have been. Munches is, indeed, one of those places which are difficult to tell about, not because of lack of

material, but because of its superabundance. It is the result of long years of care—care inspired by its owner's love for the beautiful works of Nature as displayed in trees and flowers.

S. ARNOTT.

STOVE AND GREENHOUSE.

HYACINTHS IN POTS.

THE foundation to a successful flowering of these, as with other spring bulbs, should be made in the autumn, by potting at the proper time, so that a plentiful supply of roots may form before any kind of forcing is started. I have known the bulbs potted late in the season and plunged straight away into heat, with, of course, anything but good results. In such a case the blooms usually rot instead of grow, and if they do show signs of life, the trusses hardly push up clear of the bulb. September is a good month for potting Hyacinths, and those that are required for forcing should be so treated early, following with later batches. The soil used is loam two parts, not sifted, good dry, rotten manure one part, which may be passed through a sieve, and half a part of grit. I use road-sweepings obtained after a heavy storm in preference to sand, because they are coarser and tend to keep the soil open. This compost is prepared by being thoroughly mixed, and if very dry, watered to make it in a medium state of moisture, that it may be properly handled. Five-inch pots are used for one bulb, and three bulbs are also put into pots of 8-inch diameter. These latter make showy specimens for the conservatory. In this instance, too, I am careful to select each of the three bulbs about even in size, so that there shall not be an odd look in the spikes of blooms.

The larger pots may be well drained, but one piece of crock is all that is required in the smaller. Fill these with soil and press the same down firm, but not extra tight, then scoop out a hole with the fingers to take each bulb. This is a small detail, but the practice of pushing the bulb down into the soil is bad. The part under the bulb becomes too firm by so doing, and when it starts making roots it is liable to be forced out of the earth by that process. Do not water the bulbs after potting. This is not necessary when the soil is moist. Stand the pots on a sound bottom of ashes in a frame if possible. One might then easily put the lights on later in case of much rain. Cover the bulbs, pots and all to a depth of 6 inches with cocoa fibre. This material is lighter and better than ashes and the latter may contain sulphur, which would be detrimental to growth. The Hyacinths are thus placed in the dark to make roots and not tops, and they may be practically forgotten for about six weeks. After that time examine them. Should growth be so forward as to exhibit the blooms in a small state in the cluster of leaves, remove the pots at once from the fibre; if left longer there would be danger of rotting. Gradually bring the growth to the light. This may be done by placing inverted flower-pots over each bulb for a few days. An ample supply of roots should be noticed by their running out of the drainage hole and on the surface of the soil. If in this condition, one has obtained the secret, if any, in the proper development of Hyacinths. Many think that big bulbs must be had to produce large spikes, but I prefer medium-sized, well-ripened ones, and depend more upon plenty of roots.

It is not advisable to allow frost to penetrate the frames. This cripples the growth, and for this reason it is better to remove the pots to greenhouses where fire-heat is only used in

severe weather. The shelves near the glass are a good position. Here a sturdy growth is assisted. Little water is needed, although I would not let the soil become over-dry. Steady, cool progress is best for Hyacinths, and generally they do not force well. A few kinds, however, may be had in bloom so early as January. Blanchard and La Tour d'Auvergne, two whites, the one single, the other double; Amy, red; Charles Dickens, blue, also the pink variety of this, are a few kinds better than the rest for forcing. Use tepid water; this even when not forcing, as the roots are easily checked. Also use no stimulant whatever before the blooms show colour, the object being to keep the leaves as low as possible. This period reached, I feed the plants at each watering with soot water and nitrate of soda alternately. What is required is something to quickly push out the bells to their utmost size.

There is a great deal of waste in connection with spring bulbs. They can hardly be made to produce blooms the second year equal to the first, but very nice useful spikes can be had by not neglecting the bulbs when the flowers are past. We usually find the roots stood in some out-of-the-way part of the garden and forgotten. If rain comes with regularity all is well, but when this is not the case the bulbs perish. Cut the flower-stems off the moment they have passed perfection, then stand the pots in a sunny position. Keep the soil regularly watered until the leaves die down naturally. The bulbs may then be shaken from the soil, dried, and stored for use again in autumn.

The following are the names of a few sorts found most reliable. They are single. Double Hyacinths are less showy and useful. Whites, La Grandesse, Mont Blanc; bluish-white to rose colour, Princess Amelia; pink, Charles Dickens, Moreno, Fabiola, Koh-i-nor (semi-double); light to dark red, Robert Steiger, Lord Macaulay, Vurbaak, General Pelissier; blues, Czar Peter, Queen of the Blues, Charles Dickens, Lord Derby, King of the Blues, Grand Maitre. King of the Blacks, very dark, is always admired. Ida and King of Yellows are good of the last named shade.

H. S.

ACHIMENES.

SOME time ago I was pleased when visiting Carron House Gardens, Norwich, to see such a fine batch of Achimenes there in full beauty. Unfortunately, they have of late years fallen into disrepute, a deal of time and trouble being expended on subjects far less useful and ornamental. One used to see them exhibited in large bush form at the London shows, these being grown in pans. One of the chief points in their culture is preserving the corms in a plump condition during the winter. I have known them stored away in boxes of silver sand and kept in a cool place, the corms under this treatment keeping sound and plump till wanted in spring. Others turn the pots on their sides after the growth has died down in autumn, keeping them in the greenhouse through the winter. The time of starting must depend entirely on the date at which the plants are wanted to flower. If in May, place them in heat in January; if in June, February, and so on; March and April potting securing flowering batches in August and September. Some growers place the corms in the pots in which they are to flower, others preferring to start them rather thickly together in pans or boxes and finish off afterwards. Both systems no doubt have their advantages. Thorough drainage is imperative, as Achimenes cannot endure a waterlogged condition, yet require

frequent supplies of moisture when in full growth. Some growers pass the soil through a rather fine-meshed sieve, but I prefer rubbing it down with the hand, preserving all the fibre, as these plants enjoy a free, open root-run. A light fibrous loam, with a fifth part cow manure reduced to the condition of fine mould, leaf-mould, and coarse silver sand will grow them well. An ordinary plant stove suits early batches best, but they must have a light position tolerably near the roof glass, a slight shade being given from the full force of the sun. This shade is also necessary in order to prevent scorching, which is very apt to occur by the sun coming on the moist foliage early in the day. Draught also quickly makes its mark, for which reason front air ought not to be given till June. Early closing, coupled with copious overhead syringings, is essential to a free and rapid growth, and when grown for exhibition the young plants should be pinched when from 4 inches to 5 inches high.

For exhibition, wide pans are the most suitable, but for ordinary purposes pots $4\frac{1}{2}$ inches or 6 inches in diameter are best. When well established, weak manure water made by steeping a bag of sheep manure in a tub of water may be given three times a week. As soon as the bloom shows itself, plants occupying a warm stove temperature should be removed to a somewhat cooler one, as flagging and partial collapse will follow any sudden removal from a stove to an airy conservatory or exhibition tent. For later batches cooler treatment answers best, and Achimenes may be retarded for a considerable time by placing them in a house with a north aspect.

C. N.

Vallota purpurea.—The brilliantly coloured flowers of the Scarborough Lily come in most useful for conservatory or room decoration at a time when the variety of pot plants in bloom is rather limited, and as it is of very easy culture it is surprising it is not more largely grown. Some good turfy loam and a little leaf-mould and sand are all it needs, and pots about 6 inches in diameter with from five to seven good strong bulbs will make a good show. The bulbs may be kept two or three years in the same pots, as they do not like too frequent root-disturbance; in fact, one finds old clumps that have not been repotted for years flowering splendidly.—J. G., Gosport.

GARDEN FLORA.

PLATE 1238.

TALL-GROWING HYBRID HERBACEOUS LOBELIAS.

(WITH A COLOURED PLATE.*)

THE beautiful free-blooming and almost hardy forms of hybrid Lobelias figured on the accompanying coloured plate are hardly done full justice to as to size of their individual flowers in this illustration, as the flowers of most, if not all, of them are considerably larger in my beds this season than they were when the drawing was made last year. Monsieur Rivoire, of Lyons, has done more for the improvement of this class of Lobelias than any other raiser, though to Mr. Campbell, gardener to Lord Ardilaun, we are indebted for Firefly, one of the brightest and largest flowered in cultivation. Of the varieties figured on this plate the one on the left is named Rivoirei, and is an extremely beautiful variety and quite a new break as to colour; the next is Ibis, quite one of the most beautiful and free-blooming of them all. The dwarf one is a pretty little miniature form named Belle Bordure. The

* Drawn for THE GARDEN by Miss Tisdall in Mr. Guibleton's garden at Belgrove, Queenstown, Cork. Lithographed and printed by J. L. Godart.



very dark one is *atropurpurea*, one of M. Rivoire's seedlings. The pure white form is a very free-blooming form of the syphilitica section of the family named *Papillon Blanc*. The crowns should be divided in the spring and quickly increase. W. E. GUMBLETON.

THE WEEK'S WORK.

KITCHEN GARDEN.

TURNIPS—LATE SOWING.—If the first sowing of Chirk Castle or other favourite variety was made when advised, the crop will now be ready for thinning. Allow ample room between the plants, as without a free circulation of air satisfactory results cannot be expected with Turnips which are to stand the winter. Crowded plants have flabby foliage, which is sure to suffer if the winter is severe. Make now a final sowing of Chirk Castle, and this will afford good useful sized bulbs during December and January, and likewise tender green tops, these being esteemed in the dining-room for a change. Should the Turnip fly show itself when the seedlings appear above ground, as it sometimes does even at this advanced date, liberal dustings of soot and lime must be given; at the same time a little guano may be added, which will stimulate growth as soon as rain comes.

CABBAGES.—In large gardens where extra early sowings of spring Cabbage were made, the plants will by this time be large enough for transplanting. In dry seasons like the present the advantage is seen of having a firm root run. On newly-turned ground plants do not become established nearly so soon, and drought very soon affects them. Where, however, the plot has now to be prepared, let it be deeply dug and well enriched with manure from the farmyard or piggery. I would not advise, even where ground is scarce, planting on sites recently occupied by Cauliflower, or attacks from the mite which so often injures the latter crop may be apprehended. It is a capital plan to sprinkle a little fresh lime on the surface, digging it in with the manure, also a little soot. These ingredients will not only stimulate growth, but also assist in eradicating the greatest enemy of autumn-planted Cabbage and Coleworts—the underground grub. If these early batches of Cabbages were pricked off from the seed-beds on to a spare plot when large enough to handle they will now lift well, a good ball to each being obtainable. On no account lift the plants without previously giving a good soaking with water through a rose. This should be administered the day previous. If the weather is dry and this precaution is not taken, the bulk of soil will leave the roots and flagging, with probable loss of lower leaves, follow. Plant with a trowel, allowing a space of 2 feet from row to row and 18 inches between the plants. Plant in drills of moderate depth, water home, and draw a little soil round the collars to prevent evaporation. Some water the drills the day before, which is a good plan in dry summers. Plants resulting from seed sown about August 20 will now be ready for thinning. When far enough advanced I would advise the pricking-off system even in the case of these successional batches.

MICHAELMAS CABBAGE.—This term is applied to plants grown in some localities for coming into use at the end of September and during October, secondary transplantings from the same seed-bed resulting in nice white heads during November, these being delicious after having been subjected to a few keen frosts. These batches should now receive one or two good waterings with liquid manure, no matter how copious the rains may have been, as at this stage they draw much nourishment from the ground. Keep the Dutch hoe moving between the rows not only with a view to eradicate weeds in their infancy, but to admit sun and air. Where old fly or caterpillar-infested plants are growing near at hand, they must be cut hard back and allowed to make new growth, or

the pest will probably find its way to the younger beds.

GENERAL WORK.—The Dutch hoe should now be put through all growing crops for the last time, as, in spite of absence of rain, night dews have induced many tiny weeds to spring up. If this batch of weeds is left alone and the winter proves mild, the probability is that the seeding stage will be reached, which is an evil. Any late-planted quarters of winter stuff if yet unearthed should be done at once, for the double purpose of steadying the plants against rough winds and protecting from frost. Where practicable, cut now a quantity of the common Bracken, and when by occasional turning it has become well seasoned, cart home and stack. This will prove invaluable in winter for covering Celery ridges, Globe Artichokes, and for protecting Lettuce, Endive, and other crops in frames and pits. J. C.

FRUITS UNDER GLASS.

PEACHES AND NECTARINES.—Midseason houses will now be cleared of fruit, and every chance should be given to the trees to ripen off their foliage slowly and naturally by providing plenty of air night and day and by keeping off insects with a free use of syringe or garden engine, the latter for preference, as in houses of good size syringing is apt to be done in a slipshod fashion and with less force than a good engine will give. It is a great boon to Peach and most other hardy fruit trees grown under glass if they can be exposed for the few autumn months to full air and the night dews, which seem to greatly invigorate them, and to this end I would always recommend medium-sized houses from which the lights can be removed at this time of the year, provided the houses are so constructed as to be practically drip-proof when the lights are in use. If any planting is contemplated in the Peach houses, it will be advantageous to prepare a heap of compost for the purpose beforehand, and sufficient should be got ready now, or as soon as the opportunity to prepare it arises, to serve for all the planting that is to be done in any of the houses, as the ingredients used get better toned down when well mixed in bulk some weeks before the trees are planted. Recently when writing of early Peaches I went rather fully into the subject of replanting and the soil which I preferred for the purpose, but I may repeat, in short, what the ingredients are, viz., good, sound fibrous loam chopped up into cubes about 2 inches square as the staple, mortar rubbish in quantities varying with the nature of the loam, but sufficient to ensure porosity, lime in the slaked, powdery state, and burnt earth from the garden smother. I use no animal manure, but add a few crushed bones when the border is made entirely inside. If turfy loam is only to be got in limited quantities, almost any ordinary garden soil can be used to make up the deficiency, provided it is sweet.

POT TREES.—The present is an excellent time for potting on any of the orchard-house trees that may need it and which have been cleared of their fruit, whether these are Peaches or any other of the mixed occupants of the ordinary orchard house. Trees which have reached their limit as to size of pot or other receptacle need to be carefully managed, as the balls must be slightly reduced in size and the roots carefully pruned in order to make room for new compost. Those which can be afforded more room will only need a slight disturbance of the soil round the outside of the ball, using for the purpose a pointed stick, which should be kept clear of any large roots. The crocks, too, should be removed carefully so that the ball may be placed low enough in the new pot. Cover the drainage with tough turf, cut thin, and ram the new soil in round the ball as firmly as possible, as with the soil in good condition as regards moisture it is not easy to over-do the ramming. Of course, the old ball should have a good soaking of water some hours before potting takes place. If the newly-potted trees could be placed under cover, kept shaded and syringed for

a few days, they will be grateful for the attention and will hold their remaining leaves without any assistance of water at the roots until the latter begin to be active again, after which the trees may be returned to the open air and treated in common with those left undisturbed.

POT FIGS.—I like to pot up early Fig trees much earlier in the year than this, but those who intend adopting the usual practice of autumn potting should not leave it any later. Similar soil to that recommended above for other fruit trees will be found suitable for Figs. In the case of trees which have not well filled their pots with roots it will be advisable to remove a good bit of the old soil to make room for the newer and sweeter compost, which should induce better root action. All the pot stock of Fig trees should now be in the open air and in a good sunny position, but the pots should be protected from the full force of the sun-heat by covering them with litter or some other such protective material.

MELONS.—The bottom-heat in which the late crop of Melons is growing will now need careful regulating so that it does not drop too low, as a lowering of the temperature about the roots, risky at any time, is doubly so now, and would certainly result in watery, ill-flavoured fruits, even if it did not stop them from swelling altogether. Very great care is also needed in watering as regards the temperature of the water used, which should be above that of the bed or the soil in which the plants grow, the method of its application, keeping it well away from the stems of the plants, and in the quantity used, which should only be sufficient to moisten without absolutely soaking the soil. After the Melons begin to net, heavy soakings are dangerous, as the fruits are almost sure to split before they ripen, and they will then be useless. Shut up the house quite early and avoid syringing late in the afternoon, as the leaves ought to be dry before night. Atmospheric moisture may be kept up by sprinkling the floor and walls as often as necessary, and this should be sufficient without any overhead syringing after mid-day. The things to be avoided with Melons, at this late date especially, are checks—on the one hand, by lowering the temperature about the roots, and on the other, sudden impulses by heavy waterings. Keep all lateral growth stopped back closely and frequently, so that the foliage of which the plants are divested at any one time is thin. Weekly fumigations up to the time of the fruit netting are necessary to keep down fly.

BANANAS.—Those plants which are showing for fruit should be well fed with liquid manure at each watering, and excessive humidity of atmosphere must be avoided. Ventilate the house for a few hours daily, but always keep the tropical habitat of the plants well in mind. If any of the stock has reached what ought to be fruiting size without showing signs of fruit it will be best to keep them a little on the dry side for a week or two until the spikes appear, after which more liberal treatment is desirable. Where there is room for a fairly continuous supply of plants and it is thought advisable to pot up more suckers this year, these should be detached as soon as they get big enough and potted up, plunging the pots in bottom heat at once, so that a goodly quantity of roots may be formed before winter. Later stock, or that which generally gives the yearly supply of plants, may be left attached to the parent plants until after the turn of the year. A good sucker plant taken off when the parent has ripened its fruits and carefully treated until established will generally make a plant of the best sort for fruiting next winter or spring at a time when the supply of good home-grown dessert fruits is at its lowest ebb, and if this is the only crop of Bananas needed, forward suckers may be sacrificed with advantage. CORNUBIAN.

Leaves prematurely falling.—A lesson may now be learnt with regard to the manner certain trees and shrubs can endure the exceeding heat and drought. Lilac bushes, ever a dense mass of

roots, are affected everywhere, and in thick shrubberies still worse. The Horse Chestnut even in some isolated positions has been quite a wreck for a long time, shedding its leaves abundantly as though in mid-autumn. Black Italian and Lombardy Poplars also are great sufferers, though the chief among them all is the common Sycamore, and this is either dead or dying in many instances. Long ago the foliage was curled completely up and now hangs lifeless upon the almost lifeless twigs. White Thorn, too, is suffering. Most serious of all, however, is the way many early Apples are suffering from lack of moisture, the fruit no larger or but little larger than it was some weeks ago. This, coupled with failure or partial failure in other kinds, makes a very disastrous whole where much land is given up to fruit culture.

FRUIT AND VEGETABLE CROPS.

WESTERN.

Batsford Park, Moreton-in-Marsh.—For the past two or three seasons the Apple crop has been light, and this year it is even worse, most of the orchard and many garden trees being without fruit. There was by no means a profusion of Apple blossom generally, and frosts were very destructive to the flowers on many other kinds of fruit trees. Some garden pyramids are bearing satisfactorily, the best being, as in previous years, and which rarely fail to bear, Stirling Castle, Tower of Glamis, and Warner's King. White Transparent, Lord Suffield, Cockpit, Worcester Pearmain, and Ribston Pippin are fairly good, and a few others are bearing lightly. Cox's Orange Pippin and Blenheim Orange are this season almost failures, which is a great loss, the latter being much grown in the neighbourhood. Pears are scarce, excepting a few varieties which are bearing an average on pyramids, namely, Beurré Clairgeau, Beurré d'Amanlis, and Gratioli of Jersey. Clapp's Favourite, Thompson's, and Durondeau have a few fruits, but most of the other best varieties, including wall trees, have scarcely any upon them. Blossoms on wall fruit trees suffered a good deal from frost, especially the best and most prominent ones. Fortunately, some nearer the walls escaped, and the crops have proved better than could at one time have been expected. Peaches outside have for two or three years been much blistered and unsatisfactory. The best are Royal George, Bellegarde, and Princess of Wales; and of Nectarines, Violette Hâtive and Pitmaston Orange. Apricots were rather small, possibly because of the best flowers having been killed, but of good quality, Large Early and Moorpark being the varieties. Plums in the open are generally very scarce. On walls we have to protect the buds with netting, and this may have helped to preserve the flowers from frost, as the crops on many trees are an average, notably Rivers' Early Prolific, Purple Magnum Bonum, Pond's Seedling, Kirke's, Nectarine, Victoria, Webster's and Purple Gages. Cherries are not a heavy crop, but fairly clean and of good quality, especially Morellos. The trees of dessert varieties do not succeed so well. Strawberries did well, but the season was somewhat short on account of excessive heat and drought. Fortunately, the flowers escaped injury by frost and the crop was heavy and the fruit of excellent quality. Royal Sovereign, Keens' Seedling, and President are most largely cultivated, with Vicomtesse H. de Thury and Sir Joseph Paxton in addition. Monarch and Leader (the latter a compact grower and heavy cropper) and the Gunton varieties were also grown and proved very serviceable, the two first being early and the others useful for late supplies. Raspberries were better than was expected considering the very hot, dry weather when they were ripening. Gooseberries were plentiful where the buds were protected from birds. The crop is chiefly in demand here while green for cooking. Red, White and Black Currants were very good, the fruit clean and of a good size. Walnuts and other

nuts fairly plentiful. Blackbirds and other birds have been very numerous and unusually troublesome in the garden, finding their way through nets wherever there was fruit beneath, and doing a great deal of damage even to green Apples, Pears, &c. Possibly continued hot and very dry weather prevented them finding other food.

Early Potatoes have been somewhat small, but clean and free from disease; midseason and late ones also look well up to the present. Asparagus was an excellent crop; Broccoli stood the winter well and was plentiful; summer Cauliflowers suffered from drought and have been much injured by caterpillars. Early Peas did wonderfully well, but a good many of the midseason ones were a failure, mildew and thrips attacking them during hot, dry weather. Globe Artichokes were early and very plentiful, the plants being favoured by a mild winter. Tomatoes outside are promising to bear heavy crops, and Celery, Brussels Sprouts and winter greens generally look much better than last year, though all will be improved by more moisture in the ground and atmosphere. —J. GARRETT.

Eatington Park, Stratford-on-Avon.—The frosts we had late in May made great havoc in many gardens, especially those near the water. The Strawberry crop was very light; Raspberries, Currants, and Gooseberries average crop; Apples average; Pears scarce; Apricots, Peaches, and Plums almost a failure.

Vegetables in general are good. Beans (Kidney) are late, owing to having been cut down by frost; early Potatoes are small; Peas abundant. —W.M. HAYLOCK.

Poltimore Gardens, Exeter.—Apples average and good. Plums very thin, with the exception of trees in sheltered positions. Pears in the open suffered from the frost, consequently a very light crop. Peaches and Nectarines are very good. The trees suffered much from blister, and some varieties not noticed before have suffered from mildew. Morello Cherries are good; other kinds thin. All small fruits are abundant. Apricots very few. Cob nuts light crop; others good.

Potatoes are very promising at present, and early varieties heavy crops. Peas so far have been remarkably good. —T. H. SLADE.

Orchardleigh Park, Frome.—Apples are a very poor crop in this neighbourhood, in some orchards none at all. I have a nice crop of Keswick, Lane's Prince Albert, Frogmore, and Bramley's Seedling on some young trees in a sheltered part of the garden, but the majority of older trees are quite bare. Pears are a light crop, but of good quality. Apricots, where covered with glass and thick canvas when in bloom, are a good crop; Peaches good; Plums and Cherries much under average. Small fruits have been an average crop; Currants good; Gooseberries middling; Raspberries abundant, but small, owing to drought; Strawberries an excellent crop.

Vegetables are up to the present excellent. I have had heavy crops of Peas; Broccoli and early Cauliflowers have done well; later sorts are suffering now from the hot and dry weather. Shallots have done well, but Onions have mildew badly. Brussels Sprouts and winter greens planted early are looking well. Potatoes, first and second early, are only a medium crop. Late sorts at present are looking well, and, if rain comes soon, likely to be a heavy crop. —F. CLARK.

Rood Ashton, Trowbridge.—The season has been fraught with many disappointments both as regards fruit and vegetables in this neighbourhood, but perhaps the most signal failure is found in Strawberries, which have furnished but a small supply, and the quality not up to the usual standard. Frost and drought both contributed to this failing, the latter probably the greater share. Apples in some cases have a full crop; others a very partial crop. Stirling Castle, as usual, needs severe thinning so thickly has the fruit set, as also does Court Pendu Plat. Ribston Pippin, Golden Noble, King of Pippins, Cobham, Leyden Pippin, Cox's Orange, Tower of Glamis, Rambour Franc, Stirling Castle, Gravenstein, Bismarck, Cellini, Damelow's Seedling,

Annie Elizabeth, Duchess of Oldenburg, Court Pendu Plat, Lord Grosvenor, Worcester Pearmain, Adams' Pearmain, Reineette du Canada, Peasgood's Nonsuch, Hoary Morning, Warner's King, The Queen, Beauty of Bath, Cockle Pippin, Syke House Russet, Ecklinville, and Cox's Pomona are carrying the best crops. Pears are less satisfactory even than Apples, for though the trees bloomed splendidly and appear to have set well, wholesale dropping has changed the aspect materially. What Pears there are have a contracted look about them and are undersized. Beurré Clairgeau, which was a mass of bloom, is almost bare of fruit, and the same may be said of many others. The most freely fruited include Emile d'Heyst, Fondante de Bihorelli, Soldat Laboureur, Bezi de Veterans, Beurré d'Amanlis, Dunmore, Ne Plus Meuris, Beurré St. Louis, Beurré Hardy, Doyenné Boussoch, Seckle, Countess La, Louise Bonne of Jersey, Althorpe Crassane, Brown Beurré, and Amandine de Rouin. Plums are the lightest crop I have known for several years; the only sorts that can be said to be carrying an average number are Pond's Seedling, Grand Duke, Blue Gage, and Prince Englebert. Kirke's, Jefferson, Victoria, Coe's Golden Drop, Orleans, Early Prolific, and Washington, as well as the Gages, are thinly fruited. Cherries, both Morello and dessert, have fruited well; so have Peaches, despite the sharp frosts that occurred while they were in flower. Apricots are thin; so are Figs, the fruiting points having been damaged by frost. Gooseberries are about half a crop; Currants, both Red and Black, full; and Raspberries above the average.

Vegetables have given much trouble from the spring frosts and drought. Since the beginning of June the rainfall has been short and sun-heat considerable. Under these conditions Peas have podded prematurely, and the late summer crops will be uncertain. Early sowings did remarkably well. Potatoes are much under-sized, and many are now ripening prematurely. Late Potatoes are healthy, but not so vigorous as usual. Disease appeared among the first earlies in June, but not to any serious extent. Onions are swelling freely, and as yet without mildew or maggot. Cabbages were late and singularly deficient in flavour and tenderness when cooked. Early Cauliflowers were good; later ones without artificial watering are poor in growth. Dwarf and Runner Beans are making good growth, but the latter are late in podding. Marrows are plentiful, as also are good Carrots. Asparagus was never better either in quality or quantity than this year, nor were Globe Artichokes. Lettuces were very fine in early summer, but are giving some trouble now. —W. STRUGNELL.

Crichel, Wimborne.—Fruit much under average owing to late frosts. The following suffered, viz., Peaches, Nectarines, Apricots, Strawberries, Red Currants and Cherries.

Vegetables generally are good, but have a tendency to develop prematurely, owing to hot and dry season. —P. ISHERWOOD.

Staunton Park, Staunton-on-Arrow, Hereford.—With but one or two exceptions there will be but a very light crop of stone fruit. On the other hand, Apples and Pears promise a very heavy crop. Strawberries have done well this season, especially Royal Sovereign, and bush fruits generally have been good.

I found Asparagus rather later this spring, but Peas are quite up to the standard, and I have no cause to complain about the vegetable department. On the whole, everything will be equal or better than last season. —THOMAS H. WINSKILL.

Frome, Somerset.—On the whole this cannot be described other than a most unfortunate season. Late frosts, cold winds and summer drought have all conspired against the poor fruit growers, and on all sides we hear complaints of the scarcity prevailing. Writing of the district generally, I may state that Apples are fruiting well in a few instances, while the crops are of the lightest in others. Cider fruit promises to be very plentiful in places, and if the rain comes too

late to swell this to a good size it is likely enough that the cider made will be less in quantity than anticipated, but superior in quality. In some gardens bush trees of Lord Grosvenor, Stirling Castle, Duchess of Oldenburg, Cellini, Ecklinville and Warner's King are bearing heavy crops, and I have met with a few good trees of Cox's Orange Pippin, Newton Wonder and Ribston Pippin. In my own case the trees suffered from spring frosts, and there is only a sprinkling of fruit on any of the trees. Pears are much scarcer than Apples, and in low positions are a complete failure. In the orchards the commoner small varieties, including perry Pears, are carrying good crops, but of choice fruit there will be very few indeed to gather. Plums are quite as scarce as Pears, but it is worthy of note that those two old favourites, because the most reliable, Early Rivers and Victoria, are carrying good crops in places. Cherries have done well both against walls and in the open. Apricots are producing better crops than anticipated. Hereabouts they were in flower during a very cold time, 14° and 15° of frost being registered, and it would have surprised no one if an utter failure had occurred. Peaches and Nectarines are also doing well, and good crops are borne on most of the trees. Gooseberries have been fairly plentiful, or a good average crop, and the dry weather has been greatly in favour of ripe fruit. Currants, Red and Black, were a good average crop, and Raspberries above the average, though quickly over. Strawberries were disappointing. All the early flowers were killed by frost, and as a consequence of this and hot and dry weather, early, midseason, and late varieties were being gathered from at much the same time. This meant a short season. No variety stood out pre-eminently good.

A backward spring and a dry, hot, early summer have not been good for vegetables generally. Potatoes have been somewhat undersized from the first, and the main and late crops are so much affected by the drought and great heat that the crops will be light. Most of the other root crops are beginning to fail, Onions raised in boxes and planted out being the most promising crop of all. Peas were late and are collapsing wholesale. Runner Beans are in a poor plight, especially on poor, unmulched ground. There is every likelihood of the winter crops being much under the average, as not much planting has been done. Vegetable Marrows and Tomatoes are the most promising crops.—W. IGGULDEN.

Longfords, Minchinhampton, Glos.—The fruit crops here are the worst I have had for fifteen years. Peaches, Plums, and Apples are very scarce; the spring frosts played havoc with the blossom, but the trees are clean and healthy. Apricots and Figs are a failure; Pears a moderate crop on Winter Nelis, Marie Louise, Glou Morceau, Doyenné du Comice, Jargonelle, and Pit-maston Duchess. Small fruits were plentiful and good. Strawberries Royal Sovereign, President, and Scarlet Queen excellent; Raspberries Superlative and Fillbasket, two prolific varieties, are good; Black and Red Currants and Gooseberries also good.

I have had a good supply of the following Peas: William I., Veitch's Earliest Marrow, Criterion, Autocrat, Telephone, and Ne Plus Ultra, still one of the very best main-crop Peas, but the dry weather is telling on them now. First and second early Potatoes are good and free from disease.—W. DRIVER.

Kingston House, Dorchester, Dorset.—Fruit crops, with the exception of Apples and bush fruits, are under average in this district. Apples are a heavy crop, and the quality good. Tom Putt, which is very much grown about here, has an enormous crop. Pears are less than half a crop; very much cracked. Plums are a failure except a few standard varieties such as Victoria and Orleans. Dessert Cherries are fairly good; Morellos very poor. Apricots are an average crop; quality good. Early Peaches and Nectarines were practically a failure; midseason and late varieties average, quality good. Brown

Turkey and Brunswick Figs on walls seldom fail to give good crops here. This season there are not ten where there used to be a hundred. Mulberries are a heavy crop, and Walnuts are good. Small bush fruits are over average; Strawberries under average, and the season very short.

Vegetables, in spite of the prolonged drought and a light soil, have been well up to the average, but the drought is beginning to tell on the Brassicas and late Peas. Potatoes are a heavy crop, the tubers rather small, quality excellent; all roots heavy and clean. Early and second-early Peas have been extra good. Late Peas, notwithstanding deep cultivation and heavy watering, look far from promising. Tomatoes out of doors on walls and espaliers are ripening off heavy crops. I have tried over twenty varieties side by side, and find Chemin, Ham Green, Ladybird, and Conference in the order named the heaviest croppers and the most useful.—BEN. CAMPBELL.

Shobdon Court, Hereford.—The general outlook is very good. Small fruits, Nuts, and Apples are above the average. Strawberries have been abundant. Pears, Plums, and Apricots are not so plentiful; still, many trees of these are carrying good crops, especially cordon Pears on walls.

Peas, both early and mid-season kinds, have done well, and up to now no trace of mildew on the later varieties. Onions, Carrots, Beetroot, and, indeed, all root crops, could not very well look better, and all the Brassicas are growing apace, giving promise of a good and bountiful supply for autumn and winter use.—THOS. PLUMB.

Inwood House, Henstridge.—The fruit crops in this part vary; some are very fair, while others are poor. Apples are good in some gardens, while in others not far away the crop is poor. Pears are good, and an average crop of fine fruit. Peaches and Nectarines are very good. Apricots are below average, owing no doubt to the frost when in bloom. Plums are also below an average. Nuts are a poor crop in most places. Strawberries have a fine crop and above an average, Royal Sovereign being the best. This is a fine Strawberry for forcing, and also outdoors. Gooseberries are fair in most places, but not quite an average. Currants, Black and Red, are very good. All small fruits are fair.

The vegetable crops around here are looking well, Potatoes especially. Early Potatoes have been very good and of splendid quality. The late and mid-season ones are looking well, with no disease as yet. If disease keeps away there ought to be a wonderful crop, that is if we get one more soaking of rain to carry them through. The small local shows have caused labouring men and cottagers to take more interest in their allotments and gardens by looking after vegetables and growing them well and keeping them clean.—T. WILKINS.

The Gardens, Doddington, Chipping Sodbury.—Fruit of all kinds is unusually scarce this season except Currants of all kinds and Raspberries, which are above average and good.

We have good crops of Potatoes, and vegetables of all kinds have done well.—W. GREENAWAY.

Batheaston, Wiveliscombe.—Strawberries, Gooseberries, Currants, and Raspberries have been very abundant. Apples are a good average crop. Plums and Pears are very scarce.—R. J. CARTER.

Tregothnan, Cornwall.—The fruit crop here and in the district is in most cases good. Apples are plentiful; Pears rather thin; Cherries (Morello) good; Plums, with the exception of Victorias, thin; Peaches good average; Strawberries, Raspberries, Gooseberries, Red, White, and Black Currants all above average.

Vegetables are suffering badly from want of rain. Early Potatoes are good; Asparagus very fine; early Peas and Broad Beans good, but later sowings of both are badly infested with mildew and the crop very poor; dwarf French Beans are good, but Scarlet Runners are dropping from want of moisture; Onions, both Tripoli and spring-sown, are very good. Roots and green

crops will be very poor unless we get early showers.—WM. ANDREWS.

Frampton Court, Dorchester, Dorset.—Apples are very thin in this neighbourhood. What there are on the trees are looking well and promise to be fine, the trees being healthy and clean. The same remarks apply to Pears. Cherries are considerably over the average; Plums much under average, but promise to be good as the trees are perfectly free from insect pests. Peaches and Nectarines on south walls are quite a failure, but those on a west wall are fairly well cropped. Red, White, and Black Currants are all bearing good crops and of fine quality. Gooseberries are rather under the average, caused by birds taking the buds during the winter. Raspberries are bearing a good heavy crop, but the fruit is small; Bullaces and Damsons are a failure; Mulberries and Medlars are bearing good crops. Strawberries have been an enormous crop in these gardens, but in the neighbourhood there is no end of failures, all stating the cause to be the frost which we had at the time they were in flower.—W. J. HARVEY.

Ashton Court, Clifton.—In the early spring when fruit trees were in bloom there was great promise of an abundant crop of all kinds of fruit. Unfortunately, it did not set, as nearly all fell to the ground. In this district Strawberries have been far below the average, many growers not having gathered enough to pay working expenses. I have seen some beds that were planted three years ago that have not produced any fruit worth gathering; the plants simply dried up, not having recovered from the effects of last August and September's drought and heat. Raspberries also are an under average crop. Many canes have died outright and the fruit is small generally. The season for this fruit will be very short. Gooseberries and Currants are very plentiful, and in some gardens the bushes are breaking down with the weight of fruit, which is of good quality. Apples, Pears, and Plums in this neighbourhood also are below the average. Codlins generally have a crop, but other kinds are light.

The season for vegetables has been, and still is, very trying. The early Brassicas were badly infested with blight. Turnips, Spinach, and many other crops have no chance of growing unless plentifully supplied with water. Potatoes up to the present look well, and the early kinds have yielded good crops. Parsnips, Carrots, and Beet also look well, but I am afraid they will all be small unless they soon have rain. Peas grow well, but their period of gathering will be short. Runner Beans are looking well, although the young Beans are beginning to fall off.—H. NOBLE.

Mount Edgcombe, Plymouth.—In this district the fruit crop is a very good one. Currants, Gooseberries and Raspberries are heavy crops; Strawberries and Cherries good; Apples heavy crop, require a lot of thinning; Pears medium; Peaches and Nectarines fair; Apricots not grown, soil too light.

All vegetables are good, Peas especially so, and where all crops are looking well it is difficult to select any as worthy of special mention.—S. J. RICHARDS.

Cowley Manor, Cheltenham.—Apples are very scarce; the only variety I have carrying a crop is Keswick Codlin. All the other varieties bloomed well, but the late frosts caused the bloom to fall. Pears are very scarce. A great many varieties have none at all. They bloomed well, but were also affected with the frost. We had frost as late as the end of May. The first bloom on the Strawberries was destroyed by frost, but we have had a very fair crop of what may be termed second fruit. Royal Sovereign, British Queen and Scarlet Queen are the varieties I depend on; Royal Sovereign forces well. Red Currants, Black Currants and Raspberries are very good. Gooseberries were rather scarce; I think the frost is the cause of it, as they bloomed well. Plums are almost a total failure.

Vegetables have done well. I got most of my winter stuff, such as Broccoli, Brussels Sprouts and all sorts of Kale, planted at the latter end of

May, so it has got well established. My first spring-sown Cauliflowers (Early London) have done well. Onions, Carrots, Beet and Turnips are doing well. Potatoes are a good crop. My Peas have done better this season than ever.—JOSEPH MADDOCKS.

Abbotsbury Castle, near Dorchester.—Fruit is generally scarce, owing to late frosts and very chilly nights. Apple, Pear and Plum trees were bedecked with blossoms, which failed to set.

Early Potatoes were in many instances a failure, but with recent rains late crops promise an average supply. Here in this somewhat favoured locality Chemin Rouge and Comet Tomatoes promise well out of doors, the former setting very well.—JOSEPH BENBOW.

Trelissick, Truro.—The Apple crop is a very partial one, some trees carrying heavy crops while others have few or none. All the trees are, however, making most vigorous growth and in a fine healthy condition. Pears are a light crop. Pitmaston Duchess on young trees is truly grand,

Early and midseason Peas were all that could be desired, but the abnormal drought has destroyed all chances of late crops, and I am afraid there will be a great scarcity of winter stuff from the same cause.—W. SANGWIN.

FERNS.

ADIANTUM FORMOSUM.

THIS beautiful Fern, which is well shown in the illustration, is a native of Australia and New Zealand, but does not appear to be widely distributed, being found in one locality only in each country. The large spreading fronds are of a deep green with a bright surface, and are produced freely from thick, spreading, underground rhizomes. Where space can be given it makes large fronds, and when confined to small pots forms a compact plant. It should be

good condition throughout the winter. I have found it one of the best to withstand the effects of fogs and damp atmosphere. A. H.

SOWING FERN SPORES.

If spores are sown during the autumn, a good supply of seedlings for early spring work is ensured. Although Fern spores may be sown at any season and good results obtained, it is from those sown either early in the spring or during the autumn that success is best obtained. It is during the summer and autumn that spores should be collected, for those matured during the bright sunny weather invariably prove more prolific than those produced during the dull, damp winter months. As much depends upon collecting the spores at the right time as in the sowing and after treatment. It is not an uncommon error to suppose that the fertile fronds will hold their spores for an almost indefinite period, with the result that the fronds are often taken after all the best spores have escaped. Take *Pteris argyrea* as an instance. The true spores are black, and they drop from the fronds as soon as the spore cases are open, but there still remain the spore cases, and when these are rubbed a lot of fine brown dust is obtained, which may by chance contain some good spores, but all the best will be gone. This applies to all Ferns in a more or less degree. In collecting Fern spores it is interesting to note the various shades of colour. The *Adiantums* vary; some (as in *A. scutum*) are yellow, others vary from pale brown to black (*A. cuneatum* is brown and *A. emulum* almost black). The true spores of *Osmunda palustris* are bright green, of *Dicksonia antarctica* bright yellow, and if taken at the right time very abundant. In the *Gymnogrammas* (gold and silver) the spores are almost black. Generally a good deal of the coloured powder comes off with the spores; but if lightly shaken on a piece of paper the dark (true) spores will be found underneath the yellow or white powder. I might give other instances, but the above will be sufficient to help those who have not had much experience or have not given this matter proper attention. Another important matter is in collecting spores to take them from plants which have been isolated as far as possible from others which produce spores freely. I like to take the fronds as soon as the spore cases begin to open. Although it is generally supposed that Fern spores will keep for an almost indefinite time and under various conditions, I am quite satisfied that they are very perishable, and although under favourable conditions they may retain their vitality for a considerable time, there is great risk in using spores which have been kept long, especially if they have been damp. I prefer to have new spores when possible, or for spring sowing those collected now may be relied upon, but they should be properly dried and then kept in a cool, dry place. If more attention were paid to collecting and keeping spores under proper conditions so many failures would not occur.

SOWING THE SPORES.—In preparing the pots, the chief thing is to get some good yellow loam, which should be quite free from worms and other insects, also from seeds of any weeds, for when these spring up they often damp off, and cause the damping to spread over the surface of the



Adiantum formosum.

all trees doing well. Plums are a very poor crop. The Czar and Victoria are the only sorts that have done fairly well. Cherries of all sorts are a complete failure. Peaches and Nectarines are carrying heavy crops, which with a liberal supply of water to root and branch promise to mature well. I began picking Early Alfred on July 12, and shall finish with Sea Eagle about the second week of October, having a continuous supply from start to finish. Strawberries were a moderate crop, Royal Sovereign being the best. Sir Charles Napier is a great favourite with me, but did not do so well this hot summer. Bush fruit is abundant and good. I am still (end of August) gathering splendid Gooseberries and Red Currants from under permanent wire-net protection, which I should not like to be without after ten years' experience.

Vegetables have been exceptionally good, especially Peas and Potatoes. Of the latter, Myatt's Ashleaf, Windsor Castle, Syon House Prolific, Up-to-date, and Champion are my favourite sorts.

potted in a rough, porous compost consisting largely of fibrous loam and leaf-mould. For large specimens pans are preferable to pots, as the spreading rhizomes require more surface room than depth. It may be recommended as one of the most useful Ferns for the cool greenhouse. It also succeeds well in a higher temperature. Although nearly hardy, the fronds get blackened if exposed to a low temperature while in a growing state. I may add that it is one of the best for treatment under the patent process for preserving the cut fronds. *Adiantum Birkenheadi* is a very distinct variety of garden origin. It was raised by Messrs. Birkenhead. The fronds grow more erect and the rhizomes do not spread so freely, otherwise it would suggest some affinity to the above, the fronds having the deep green shade and the pinnules the finely-serrated margins. It succeeds well under cool treatment and keeps in

pots and destroy the spores. Five-inch pots are the best size to use. They may be filled firmly to within about an inch of the rims. No drainage is necessary; in fact, it is better not to use any, as the most important point is to keep a regular moisture. Filling the pots with loam and standing in saucers of water will ensure this. After the pots are filled they should be well soaked, and then surfaced over with powdered charcoal and crock-dust, or for the *Aspleniums*, *Platyneriums*, or others which root on the surface, some *Sphagnum* may be added. This should be carefully picked over, and all weeds, &c., removed. It must be chopped up very small, and then rubbed through a fine sieve with some sand. After damping the surface the spores may be sown. It is essential to avoid sowing the spores too thickly. If they have been saved with care, the slightest dusting over will ensure a good crop, as when sown too thickly they choke each other. If a number of sorts are to be sown at the same time, the pots for each should be removed from the others to avoid the spores spreading. If this is not done, all the pots will produce a crop of the free-growing sorts. With due care most of the varieties may be raised comparatively true. When choicer sorts or those that are slow to germinate are sown, I like to avoid having any of the free-growing sorts about, for even with the greatest care it is impossible to avoid some spores spreading about. After the spores are sown, the pots may be placed in a shady position and covered with glass. Although the direct rays of the sun must be avoided, light is essential. This point must not be overlooked, for I believe failure often occurs through keeping the pots in a dark, heavily shaded position. I have frequently noticed when the pots have stood partly under a slope that the spores germinate freely where the light falls on the pots, while they remain dormant where they get less light. The glasses should be removed and the condensed moisture wiped off before the globules have got large enough to drop off on to the surface of the pots. No surface watering should be given after the spores are sown, but the saucers may be filled up from time to time as they require it. It is not necessary to keep them constantly full; in fact, it is better not to do so, or the soil may become too wet. With a little experience it is easy to tell when the pots are sufficiently moist. They must never be allowed to get quite dry. As soon as the pots are well covered with the prothalli, they may be taken off in small patches and pricked off into pots or boxes which have been prepared with a surfacing of more suitable soil for the young seedlings to root into. These will require dividing again about the time the first tiny fronds appear. Where Ferns are grown it will often occur that numbers of seedlings spring up under the stages and on the walls, or even on the surface of the pots. I now have a fine crop of *Gymnogramma Alstoni* on the surface of some pots which are suspended to the roof. Although this sort of thing may often occur, it is not safe to rely on it where a large stock is required, for it will generally happen that the sorts least needed are the most abundant.

A. HEMSLEY.

A double *Gypsophila paniculata*.—Until a fortnight or so ago I was unaware of the existence of a double variety of the graceful *Gypsophila paniculata*. Such may previously have been in existence, but if so I have not heard of it. At the time alluded to a gardener near London who has charge of a large collection of hardy flowers wrote me, stating that he had raised a double form of this favourite flower. This letter has been followed by the raiser kindly sending me a spray of the flowers, which quite corroborate what he said regarding it. The blooms are quite double, but although doubled are not so heavy-looking as to be ungraceful. Possibly they may not be light enough to take the place of the single form, so largely used for cutting, but their greater substance and more lasting properties will give them advantages in other respects.

The double *Gypsophila*, when introduced, ought to find a place in good gardens, not to the exclusion of the typical form, but as a novelty of considerable beauty and merit.—S. ARNOTT.

FLOWER GARDEN.

BURMESE LILIES.

WITHIN the last ten or a dozen years several new Lilies have been introduced into our gardens, principally from China and from Upper Burmah. Of these, the one that has made itself most at home in our climate is the Chinese *Lilium Henryi*, which is rapidly becoming established in various parts of the country. The Burmese Lilies, on the other hand, must, in most districts at least, be regarded as greenhouse plants, under which conditions they are decidedly attractive, as they are so very distinct from any others in cultivation. Interest in the Lilies from this region was aroused when on September 11, 1888, Messrs. Low, of Clapton, first showed *L. nepalense* in flower. It is very questionable if any plant submitted to the floral committee of the Royal Horticultural Society throughout the year excited so much interest as this Lily, which was then awarded a first-class certificate. No one seemed to know what *Lilium nepalense* was like (even our botanical authorities differed), and when shown by Messrs. Low and proved to be so distinct and withal so beautiful, the attention of everyone was directed to this charming addition to our Lilies. The stem of *L. nepalense* is usually tall and slender, while the base thereof is more woody in texture than in most other species. Roots from the lower part of the stem are also pushed out but sparingly. The flowers in general appearance bear a certain amount of resemblance to those of *L. Szovitzianum*, but in colour they are distinct from those of any other Lily. The centre of the flower, that is to say, the basal half of the petals, is of a rich chocolate-purple tint, while the recurved portion is yellow. Individuals vary in their depth of colouring, while in some the dark portion extends over a greater part of the flower than in others. *Lilium sulphureum*, the next introduction, has proved itself the most amenable to cultivation of the Lilies from that region and the hardest of this group. Besides the specific name of *sulphureum* this is also known as *L. Wallichianum superbum* and *L. ochroleucum*. Under this latter name it was well illustrated in THE GARDEN, October 1, last year, the specimen shown flowering in an open border in a Dorsetshire garden, where the bulbs had stood for over two years. In the neighbourhood of London I have not succeeded with it permanently in the open ground, but under glass it is a very beautiful Lily. It possesses so many distinctive features that there is no danger of confounding it with any other species. The great number of its long arching leaves, the bulbils in the axils thereof, and its large, massive flowers, borne on the top of a stately stem from 5 feet to 7 feet high, combine to render it one of the most imposing of Lilies. The trumpet-shaped flowers are of a distinct ochre-yellow in the interior, the recurved portion of the petals being milk-white. The blooms are usually flushed on the exterior with purple, which varies in density according to the position in which the plants have grown. Under glass, as a rule, this species flowers during the month of August, but the season of blooming is considerably influenced by the time the bulbs are imported, their condition, and after-treatment. Where protected from the

sun's rays the flowers of *L. sulphureum* remain fresh longer than most members of the Eulirion or tube-flowered group. *Lilium Lowi*, another of the Burmese Lilies now in flower, has pretty drooping blossoms, in colour white, spotted more or less with purple in the interior. The outside of the blossom is slightly tinged with green, and there is just a suspicion of the same tint along the midrib inside. Two other species from Burmah were described about the same time, but it is questionable if they are now in cultivation. They are *L. primulinum*, once shown under the name of *L. claptense*, and *L. Bakerianum*, which I have never seen.

The bulbs merit a passing notice, for though the plants are widely dissimilar in all other respects, yet the bulbs are very much alike. True, some individuals may be selected with almost certainty; but, on the other hand, many bulbs intermediate in character crop up, and until they grow one cannot be positive with regard to them. As Lilies, in some cases at least, grow together and are dug up when dormant, probably without an opportunity to note them when in flower, they are sometimes sent to this country in a mixed state, the two kinds generally represented being *L. nepalense* and *L. sulphureum*. Strange to say, many bulbs of the Neilgherry Lily (*Lilium neilgherrense*) can scarcely be distinguished from these just mentioned. The Neilgherry Lily is now getting scarce, for it is not very amenable to cultivation, and collectors have played havoc with it in its native habitats. It is also more than probable that the same will have to be written concerning the Burmese Lilies before many years. If these last are treated as greenhouse subjects the bulbs should be potted as soon as obtained in a compost consisting of equal parts of loam and peat, with a liberal admixture of sand. The pots must be well drained and the bulbs potted at such a depth that the upper part is covered with from 1 inch to 2 inches of soil, according to the vigour of the bulb. Only sufficient water should be given to keep the soil slightly moist till the roots are active, when they can be treated more liberally. During the growing period they should have a light, airy position, otherwise the stems will run up weak. T.

Lantanas in the flower garden.—A generation or so ago, before the mortality which now frequently prevails among *Verbenas* had made its appearance, they were largely employed for bedding, and given a warm, fairly dry season they were very beautiful. Now, however, they are seldom met with, but their place bids fair to be taken by the different *Lantanas*, of which a particularly dwarf free-flowering race has sprung into existence of late years. In Battersea Park they are used with good effect, the plants being pegged down to cover the surface of the bed, and they are flowering with great freedom. A form with brilliantly coloured blossoms is there, and very attractive it is. For the embellishment of the greenhouse at this season they are also very useful, being easily grown into neat little bushes that will maintain a succession of bloom for a long time. They can be readily wintered in an ordinary greenhouse, and should be kept fairly dry during that season, but, given an intermediate temperature, many of them will bloom more or less at that period. The plants that are kept in that excited state throughout the winter do not, however, grow away in the spring with the same vigour as those that have rested during the dormant season. Their propagation is a simple matter, as cuttings of the young growing shoots strike root very readily in the spring, so that there is no difficulty in working up a stock. There are numerous varieties whose blossoms range in colour from white, or nearly so, to pink, yellow, scarlet, and crimson.

The change in the colour of the flowers after expansion is very noticeable. In the tropics these *Lantanas* increase at such a rapid rate from seed, that in many districts they form veritable weeds.—H. P.

FLOWER GARDEN NOTES.

HARDY FLOWERS.—In common with everything outside, hardy flowers have suffered severely from the prolonged drought (exceptionally prolonged, I think, here in West Surrey), and had not beds and borders destined for their reception been thoroughly well done in the autumn, the flowering season would have been very short. Experience of the soil and subsoil has led to the use of cow manure in large quantities at the autumn planting, and this in dry summers is a wonderful help. In a recent note I mentioned a very pleasing effect produced by a mixture of purple Stocks with *Sisyrinchium striatum*. This lasted remarkably well, and when the spikes of the *Sisyrinchium* were removed the pleasing grey of the foliage contrasted nicely with the Stocks. One of my very best beds this year, at any rate just at present, is a mixture of *Montbretias* with *Gypsophila paniculata*. The contrast is wonderfully pleasing and there is nothing unnatural in the combination, two points, I think, that go very far towards securing the best results in flower garden work. Both were autumn planted, the one selected corms obtained from a mass lifted on an outlying border and the other from seed sown in April, 1898. For the benefit of those who have not as yet tried the perennial *Gypsophila* from seed, I may note that seedlings throw the stronger panicles and are later in coming into flower, the season of this most useful plant naturally being more sustained. *Pentstemon barbatus*, also from seed sown at the same time as the *Gypsophila*, has also given a very pleasing display. Individual blooms are not large, about the size of those of *Cuphea platycentra*, but many spikes are thrown up from each plant and the flowering season is well sustained. Alternate batches of this and *Statice latifolia* make a charming bed. One of the best combinations I have tried is a mixture of the above-named *Statice* with plants of *Tamarix gallica* if a little special attention is given to the well-known seaside plant. It should receive similar winter treatment to that given *Hydrangea paniculata*—viz., all weakly growth should be cut clean away and strong shoots well headed back. Long graceful shoots are thereby obtained, which will afford splendid material for large vases as well as being very ornamental on the border. Where the stock of *Statice latifolia* is short, a batch can be raised from seed, the seedlings varying considerably alike in size of panicle, size and colour of the bloom and in time of flowering. Another plant to associate with the Sea Lavender that is just now at its best is *Galtonia candicans*. All the above hardy plants noted as having afforded this year a very satisfactory display are fairly tall, and it may be mentioned that for large beds or borders they are more satisfactory than things of dwarf habit, especially as forming a good centre for borders or for isolated beds on turf, but if the latter are on a small scale there are many hardy things that may be used that cannot fail to give very pleasing results. A mixture of *Geum coccineum* and the clear white *Pink Albino* made a very pleasing bed. The season, unfortunately, was against the long display generally afforded by the *Geum*, and it was more quickly over than usual. A little taste in the planting of Carnations is always productive of good results; thus a mixture of *Hayes' Scarlet* or *King Arthur* with *Mrs. Eric Hambro* makes a very bright bed; so also do fancies of the *Cardinal Wolsey* and *Lady Ardilaun* types, apricots and buffs like *The Pasha* and *Carolus Duran*, and the pinks in many different shades. Writing of Carnations reminds me to note that as the weather continues very dry, constant attention in the way of watering will be necessary, and it is advisable to see this is carefully done so that the soil is not washed away from the layers. Sweet Williams were short-lived, but the dwarf

Antirrhinum in various shades last out well where attention is given to the prompt and constant removal of seeding spikes. This latter operation has in fact been more than ever necessary this year with all kinds of hardy flowers. It was only in this way, coupled with occasional soakings, that a continuous display could be maintained.

Claremont.

E. BURRELL

Leucojum autumnale.—This delicately beautiful little Snowflake has once more come into bloom to make us feel how delightful are its simple charms when contrasted with the glow and luxuriance of ordinary autumn flowers. It is a welcome day when one sees its first blossoms open. Compared with those of the Spring Snowflake—*Leucojum vernum*—they are tiny, but their beauty is more elegant and almost ethereal



Eremurus Elwesi in Mr. Hindmarsh's garden at Alnbank, Alnwick.

in its charms. Here, in spite of its apparent want of robustness, it is certainly as reliable as any flower in the garden, and never fails to come into bloom very late in July or early in August. The silvery whiteness of the flowers is accentuated by the chocolate colouring of the flower-stems and by the little tinge of red at the base of the segments. One is always led to think that this autumn Snowflake is not sufficiently known, or it would never be absent from gardens, especially in those where the dwarf flowers are prized. I believe the few failures I have heard of have arisen from the time at which the bulbs were obtained being too late, and that they had made top growth without emitting roots. Early in July is about the latest time to procure dry bulbs, unless they have been kept very cool.

Leucojum autumnale is one of the bulbs which ought to be kept in stock by nurserymen in pots, so that it could be planted with safety at any time. I feel sure that a panful or a group of pots filled with it in bloom and exhibited at one of the leading shows would help to popularise one of our most exquisite autumn flowers.—S. ARNOTT.

EREMURUS ELWESI IN THE NORTH.

A FEW notes on *Eremurus Elwesi* as grown in my garden may interest some of your readers, more especially as it is apparent that it thrives with a little attention in a climate that one would think might be unsuitable to such a plant. The photograph, which was taken on June 16 last, shows two flower-spikes 8 feet high, the inflorescence covering the upper portion of 4½ feet. The plant is growing in free loam in a sheltered spot, where it has been since the autumn of 1897. When planting, care was taken not to bury the crown, and the roots, being very much like a star-fish, are therefore necessarily close to the surface. It is somewhat peculiar in its manner of growth, as it dies down in August and shoots slightly in October. The crowns are then covered with a piece of glass supported about 6 inches above the surface of the ground, but not closed, so as to keep the soil about as dry as possible without creating heat. In March the crowns, which have remained practically dormant during the winter, push upwards, and the massive leaves, some 6 inches in diameter, expand, forming at their bases perfectly tight receptacles for water, and in the centre of these the flower-spikes appear and rapidly extend in length.

It is necessary to prevent any water collecting in these leaf cups. To avoid this I have adopted the plan of fixing up a cap glass, supported on the points of a tripod of Bamboos and heightened as occasion required until the flower-stems are sufficiently grown and further precaution is rendered unnecessary. As will be seen, the plant requires attention, and this has been intelligently bestowed on it by my gardener (Mr. A. Law), and it is worth some trouble to succeed with such a subject. Last year there was one crown only and one flower-spike. I hope next year there may be four. In speaking of climate, of course it must be remembered that there has not been a prolonged severe frost during either of the two last winters.

W. T. H.

Alnbank, Alnwick.

Omphalodes Luciliæ.—From more than one point of view this is quite unique—unique in the exceeding delicate beauty and charm of its blossoms, and equally so in the peculiar combination afforded by the pretty glaucous foliage. It is not easy to find a good descriptive term for the colour of the flowers of this fine Navel-wort. Possibly for its wonderful profusion of flowering for months together it is one of the most remarkable of alpinists. It is, however, a plant that must ever be dealt with in a more or less stereotyped sort of way, particularly so in respect to division of the roots. At any time, however, this operation is fraught with difficulty, and on no account should be attempted at all except in spring, the months of April or May especially, and the latter of these two if the season be late and growth backward. Far better than risk its increase by division—which in any case cannot be very great—would it be now to carefully watch for every seed that ripens, and so increase the stock this way. It is so good indeed and so rare, that it may well be worth while to fertilise it in order to secure a good crop of seeds, taking care not to

gather them before signs of detachment appear. It is quite possible some of the seedlings will not retain the very striking glaucous-tinted leafage of the original, but, even bereft of this, they will assuredly prove both interesting and beautiful. Perhaps the nearest approach to its colour is the palest sky-blue, over which is a shade of silvery grey, and with age a suspicion of delicate lilac. It should be grown in deep gritty soil, loam, and good peat, quite free of manure, and be kept fairly moist in summer.—E. J.

PARK AND WOODLAND.

THE MOUNTAIN PINE.

(PINUS MONTANA.)

THE Mountain Pine offers the greatest diversity of habit. Sometimes its form is that of a very straight tree, of which the narrow, tapering, always pointed top is composed of branches in whorls, slender, and thickly covered with dark green foliage, making a thick covert. In this form it can attain in 160 to 200 years a height of upwards of 80 feet and a circumference of between 4 feet and 5 feet, but more often it stops short of these dimensions. Sometimes the branches which grow nearest to the ground take a vertical upward curve, and, like the branches of a candlestick, surround the principal stem with secondary stems, forming whorls like it and oftentimes equalling it in height. The result is a bushy, many-stemmed tree green from the base upward. In other circumstances the stem of the Mountain Pine remains very short, and its tortuous branches spreading abroad by interlacement with those of adjacent trees form inextricable undergrowths.

The root system is composed of several tracing main roots, and there is no principal tap-root. The bark in structure resembles that of *P. sylvestris*, except that it never exhibits in the upper portion of the stem the slender bright red-ochre-coloured constantly detaching scales characteristic of *P. sylvestris*. The bark of the Mountain Pine is, on the contrary, as thick in the upper part of the stem as at the base. It is, moreover, of a uniform grey-black colour, and is thickly strewn with resiniferous cells.

The young plant appears generally with seven cotyledon leaves two or three weeks after sowing in the spring. Although its length of life is great, fructification begins at about the age of ten years and remains abundant and continuous. The Mountain Pine is spread over Central Europe, of which it never leaves the high mountain regions. It is met with in the Pyrenees at an altitude of 8200 feet; very rarely is it found so low as 3772 feet in the Western Pyrenees, where it is very common, and where its lowest limit is as a rule 5248 feet. Into the plains of northern regions it never descends. It inhabits a zone which succeeds to that of *P. sylvestris* and which blends in its upper limits with those of the Larch and the Swiss Pine. It grows in all soils whatever the formation, and whether dry, moist, marshy or even boggy. Although in the last conditions named the vegetation is sickly and very slow and the form of the tree generally defective and straggling, it is only on soils of this nature that it is met with (almost exclusively) in the Jura and (always) in the Vosges. In the Alps and Pyrenees, on the contrary, it grows in all kinds of soils, even those which are dry or only cool. Abundant rains in the season of vegetation and an atmospheric humidity capable of imparting the necessary coolness to soils pre-disposed to dryness appear to be the principal

conditions of vegetation in the Mountain Pine, which resists the most rigorous frosts and stands in no need of a very high summer temperature.

The species is far from being devoid of interest; it forms by itself alone on the high Pyrenean regions (Western Pyrenees, High Pyrenees, Ariège, and Haute-Garonne) extensive forests. It is a useful tree for planting at great altitudes, serving to form screens and to raise the level of forest vegetation, which at many points shows a ceaseless tendency to sink.

The wood of the Mountain Pine much resembles that of *P. sylvestris* in northern regions, having the same white sap wood and light red-coloured heart. The annual growths are thin. Neither heavy nor hard, it is very soft to work, easy to cleave, and is much sought after for building and also as fuel. The timber of the military buildings at Mont Louis, which date from Louis XIV., is of Mountain Pine in a perfect state of preservation. The density of the wood varies between 0.441 and 0.625. Popular medicine makes use, in Germany especially—under the name Balm of the Carpathians—of a turpentine taken from the Mountain Pine and resembling that of *P. sylvestris*.—*Flore Forestière*.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

AUGUST 29.

THERE was a marked falling off in the extent of the exhibits at the meeting on Tuesday last, and the same remark applies to the attendance, if in a less degree. Those firms who regularly support these bi-monthly meetings deserve every credit; without such, an occasional show might fall off to a serious extent. Just at present it is well known that the metropolis is not crowded; many of the best patrons of gardening are away for the time being.

Three notable groups were staged on Tuesday last, that from Messrs. Veitch and Sons composed of Pitcher Plants, grand specimens in the best of health, bearing a profusion of pitchers of large size for the varieties, being finely coloured too. An exhibit like this is an educational one from the standpoint of hybridisation. The arrangement, too, was good, the groundwork of Maiden-hair Fern being quite appropriate. At the end a choice selection of hybrid Orchids was grouped. Mr. May had another of his characteristic arrangements, in which Ferns and Campanulas with Abutilons and Acalyphas were tastefully blended. Another group from Messrs. Wills and Segar, who seldom stage at these meetings, was composed of fine-foliaged plants only. Choice Palms (seldom seen) with Alocasias in the finest varieties, and suitable carpeting material made a good display. Orchids were not, on the whole, numerous; a few good Cattleyas, as Hardyana and its allied forms, were in evidence. Fruit was not largely shown by any means, and vegetables, too, were scanty.

Orchid Committee.

An award of merit was given to

CYPRIPEDIUM CAPTAIN HOLFORD.—A hybrid derived from the intercrossing of *C. superbians* and *C. hirsutissimum*. It is fairly intermediate in its characters between the two parents. The dorsal sepal is white on the outer margins, shading to green through the remaining portion, with some tracings of purple in the centre. The whole surface is heavily veined with dark green and covered with numerous miniature purple spots. The lower sepal is greenish white, veined with numerous green lines; the ground colour of the petals pale green at the base, suffused with rose-purple on the margin and over the top half, the whole being thickly covered with prominent purple spots. The large lip is deep purple-brown,

shading to green at the base. From Messrs. J. Veitch and Sons, King's Road, Chelsea.

Messrs. J. Veitch and Sons were awarded a silver Banksian medal for an interesting group of hybrid *Lælio-Cattleyas*, illustrating in most instances the usefulness of hybrids that are derived from crossing species flowering at various periods of the year. Included were several forms of *L.-C. callistoglossa ignescens* (*C. Warscewiczii* × *L. purpurata*), the sepals and petals pale lilac, the lip deep crimson-purple, veined with a darker shade. It has also some yellow markings through the base of the throat. In *L.-C. Nysa* (*C. Warscewiczii* × *L. crispata*) the sepals and petals are delicately tinted with rose, the whole of the front lobe of the lip deep crimson-purple, heavily fringed and margined with white, the side lobes pale rose, shading to bright yellow, with numerous deep purple lines through the base. *L.-C. Phryne* (*C. Warscewiczii* × *L. xanthina*) has the sepals creamy white, suffused with yellow, the petals almost white, the front of the lip deep rose, suffused with a darker shade of purple in the centre; the side lobes yellow, with traces of purple at the base. *Phaio Calanthe Imperator* (*P. grandifolius* × *C. masuca*) is a distinct hybrid, the sepals and petals deep rose, the lip of a bronzy tint, with some yellow and brown through the disc. Messrs. F. Sander and Co. sent a collection of Orchids, including a finely-flowered plant of *Oncidium divaricatum*, two good plants of *Dendrobium formosum giganteum*, a good variety of *Aerides Lawrenceae*, and *Cypripedium callo-Rothschildianum*, derived from and having the intermediate characteristics of the species indicated in the name. In *Lælia pulcherrima* the sepals and petals are pale lilac, the ground colour of the lip similar, suffused and veined over the front lobe with deep rose-purple, the side lobes pale lilac, with some yellow at the base.

Sir F. Wigan sent *Cattleya Warscewiczii* (gigas) Prince of Wales. This is one of the most distinct and beautiful forms of this species we have seen. The sepals and petals are of fine form and substance, deep rose, the broad lip rich crimson-purple, except the yellow discs and lines through the throat. The plant carried a four-flowered raceme. A good form of *C. Hardyana* was also included. Mr. G. W. Law-Schofield, Newhall Hey, Rawtenstall, sent a large-flowered variety of *Cypripedium Juno* and *C. Veitchi-Morganæ*, a hybrid derived from the species indicated in the name. The petals are broader and more spotted than in *C. Morganæ*. Mrs. Masoo, The Firs, Warwick, sent a dark form of *Cattleya Harrisonæ* and *C. superba splendens*. Mr. Coleman, Gatton Park, Reigate, showed a fine form of *Cattleya Hardyana*, the lip exceptionally dark and the sepals and petals fine in form and substance. *Houlletia odoratissima* came from the same collection. Mr. H. S. Leon had *Lælio-Cattleya bletchleyensis* (*L. tenebrosa* × *C. gigas*), a distinct and desirable hybrid, having the intermediate characters of the parents. The sepals and petals are deep rosy lilac, the lip rich rose-purple, suffused and veined with a darker shade, the side lobes similar, with some white lines at the base. Mr. H. F. Simonds, Woodthorpe, Beckenham, sent two good forms of *Cattleya Hardyana*. Mr. A. J. Keeling, Bingley, sent *Cypripedium bingleyense* (*C. Charlesworthii* × *C. Harrisonianum*), showing the influence of both parents, *C. Charlesworthii* predominating. Mr. E. Kromer, Bandon Hill, West Croydon, sent a good form of *Miltonia Regnelli*. Mr. W. Cobb brought *Zygopetalum Protheroeanum*, a distinct form of *Z. crinitum*, with dark brown sepals and petals and a deep blue lip.

Floral Committee.

The following obtained the award of merit:—

ROBINIA INERMIS ALBO-VARIEGATA.—A pretty white variegated form of a well-known plant, possibly containing too much white and too little green to mark a strongly constituted variation or even to form a permanent variegation. As shown, however, the plant is distinct and good. From Messrs. Cripps and Son, Tunbridge Wells.

GLADIOLUS JAMES H. VEITCH.—Evidently a vigorous kind with handsome salmon-scarlet flowers, the throat lined with white and spotted crimson, with just a touch of yellow beneath. From Messrs. Veitch and Sons, Chelsea.

DAILIA (CACTUS) MRS. STEPHENSON CLARKE.—A very distinct and striking form, the base of the petals pale golden and the tips of an orange-scarlet hue. From Messrs. Cheal and Sons, Crawley.

DAHLIA (CACTUS) MRS. J. H. LUSCOMBE.—A pretty rose-mauve shade with white centre, the florets strongly recurved and well fluted. From Messrs. J. Cheal and Sons.

CANNA BEAUTÉ POITEVINE.—An intense crimson-scarlet, the petals of good substance. It is said to be very useful for the flower garden. From Mr. T. S. Ware, Tottenham.

POLYGONUM BALDSCHUANICUM.—This is quite a recent introduction and certainly one of the most important of this genus. It is a free grower, quite hardy at the base. Even when the top is cut down it breaks away quite vigorously from below, and when established produces a veritable mass of its white flower clusters, that in a certain stage give a suspicion of pink colour. As a cut flower it is excellent. Its greatest value, however, is in the garden, where its neat, almost elegant habit will quickly render it a favourite among plants of semi-climbing tendency. Samples were shown both by Messrs. Barr and Sons and T. S. Ware, Tottenham, the latter also having small growing plants.

Two of the most important groups at this meeting were Pitcher Plants from Chelsea and fine-foliaged plants from Messrs. Wills and Segar. Both groups were very fine in their way, the examples choice and particularly well grown. In the former the Messrs. Veitch and Sons brought some of their finest examples, the plants well grown, the pitchers particularly fine, and in several instances finely coloured also. In the majority the examples were veritable specimens, and created not a little admiration by reason of their general excellence. Some of the finest from a decorative standpoint were Amesians, obtained from Rafflesiana and Hookeri, a splendid piece carrying some thirty fully developed pitchers, which, hanging down on the extended petioles, gave ample evidence of the former as one parent. Another splendid example was a red variety of Mastersiana with three dozen fine pitchers. *N. mixta*, too, with seventeen, was very fine, and quite equal was *N. mixta superba*. *Burkei* was in fine colour, bearing nearly two dozen handsome pitchers, while an equal number of handsome pouches depended from *Morganæ*. The finely coloured *N. Mastersiana* type was in grand condition, almost blood-crimson. *Curtisi superba*, *Wrigleyana*, *formosa*, *intermedia*, *Sedeni*, *Balfouriana*, *Chelsoni*, *Dicksoniana*, and *Hookeri* ana with thirty pitchers were all in grand form. Not the least attractive was the well-marked *N. bicalcarata* from Borneo, the pair of spines from which it obviously derives its specific name being quite prominent. The plant carried but two pitchers, but these and the broad extending foliage were an ample attraction in this comparatively rare kind. The whole of the plants were in large baskets or pots, and the splendid vigour and general condition are but another proof of how well the wants of these picturesque plants have been studied by the Messrs. Veitch. Arranged in a bed of Ferns the value of these things was enhanced. A silver-gilt Flora medal was awarded. The other group referred to, from Messrs. Wills and Segar, Onslow Crescent, South Kensington, was also very fine, the examples here being well chosen and of high order. The manner of arranging was in groups, small groups encircling a large Palm or the like, the effect being good. Among the best plants were *Licuala grandis*, a really noble piece, very distinct in aspect generally; *Livistonia rotundifolia*, a capital plant, well grown and furnished; *Steven-sonia grandifolia*, and *Martinezia caryotaefolia*; all these were prime examples and of rare size. The group was singularly rich in *Alocasias*, A.

Sanderi, A. *Thibautiana*, A. *Rodriguesiana*, A. *argyrea*, A. *Sedeni*, and A. *mortefontaineensis* being among those shown, and all more or less distinct. A fine piece of *Curculigo recurvata variegata* was in good colour, and, again, a capital group around one of the Palms consisted of *Dracaena Goldieana*, nice plants 2 feet high or thereabouts. The remaining plants were *Crotons*—only sparsely used, however. As a rule the opposite is the case, and too much of this colour the result; such plants indeed require to be used sparingly, otherwise the brilliant tones usually seen run away with the real beauty and effect of much that is far more useful in decoration. We were pleased to see *Crotons* in the minority in this case, yet enough were used to light up the group. These, with *Aralia Veitchi*, *Begonia Arthur Mallet*, the variegated Pine-apple (*Ananassa sativa variegata*), and a few smaller things in the margin, formed a most pleasing and really effective whole. Much taste was displayed in the arrangement (silver-gilt Banksian medal). Mr. H. B. May, Dyson's Lane Nursery, Edmonton, again showed his *Campanula isophylla* variety, this time, however, in its natural or trailing habit. In this way it is even more beautiful than when tied up, for the mass of flowers trails here and there in the most effective way. Quantities of this and the white *isophylla* were shown side by side amid a considerable variety of small Ferns. Other plants included in Mr. May's group were *Asparagus Sprengeri*, the very showy and beautiful *Abutilon Golden Fleece*, also very finely flowered; *Acalypha Sanderi*, surrounded by variegated *Eulalia*; the pretty *Begonia Dregei*, with its numerous nearly white flowers; and *Bouvardia Humboldti grandiflora*, which is said to be an improvement on the old form so long grown. The variety mentioned has larger flowers certainly, but the same weakness attends both—the liability to fall over in the truss. A variety of this plant that would be proof against this would be an acquisition (silver Banksian medal).

Messrs. Paul and Son, Old Nurseries, Cheshunt, had a nice lot of cut Roses in boxes, mostly arranged in batches of each. Those thus shown were William Allen Richardson, Mrs. Grant, Kaiserin Augusta Victoria, the beautiful novelty Mr. J. B. M. Camm (a Noisette of exceptional form), Mme. A. Chatenay, Maman Cochet and the beautiful white kind side by side, Mrs. G. Dickson, Mrs. Laing, and Caroline Testout, many being in capital form considering the time of year and the great heat. A great variety of *Althæa frutex* was shown, the many colours testifying to the beauty of this shrub. *Kelreuteria paniculata*, yellow, and the Water Hyacinth (*Eichornia crassipes*) were also shown (silver Banksian medal). Messrs. Sander and Co., St. Albans, brought plants of *Acalypha Sanderi*, *Dipladenia Sanderi*, a pretty kind so far as the flowers go, but apparently a poor grower; *D. atropurpurea*, with very rich maroon flowers and very dark; and *Calla leucantha*, cream, with a coloured base, not clear or generally attractive. It is said to have been raised from *C. Elliottiana* Rossi and *C. alba-maculata*. From Long Ditton the Messrs. Barr and Sons sent hardy flowers in variety, *Phlox Toreador* (salmon) and *P. Lawrence* (white) being good in their way; *Lilium speciosum* vars., *L. Henryi*, *Spartium junceum*, *Statice*, *Torch Lilies*, *Lathyrus latifolius albus*, *Pygelius capensis*, *Gaura Lindheimeri*, *Hemerocallis aurantiaca major*, *Eryngium* of sorts, *Gaillardias*, and one or two of the *Aster acris* forms. Some good bold groups of Sunflowers were also seen (silver Banksian medal). A large group of hardy things, with Dahlias of several sections, came from Mr. T. S. Ware, Tottenham. The Cactus and pompon kinds were very attractive, the former including such as *Magnificent*, Mrs. Wilson Noble, *Keyne's White*, Colonel Wilson, *Firebrand*, *Standard-bearer* and others. Among hardy things we noted *Erigeron speciosus grandiflorus*, *Cimicifuga racemosa*, *Phytolacca decandra*, *Torch Lilies*, *Helenium grandiflorum striatum*, *Pampas* and other grasses, *Sundewers*, *Heliopsis levis*, some pretty Bamboos, and a few Lilies of the *auratum* group.

Cannas were also very largely shown at one end and materially assisted the display (silver Banksian medal). A very interesting lot of New Zealand plants was contributed by Messrs. Veitch and Sons. These were *Senecio compactus*, *S. rotundifolius*, *S. Greyi*, some half dozen species of *Pittosporum* (all more or less distinct), *Olearia moschata*, *O. nummulariæfolia*, *Alectryon excelsum*, *Plagianthus betulinus* (a graceful plant), *Melaleuca ericæfolia*, *Aciphylla squarrosa*, &c. None of the plants were in flower, but in many kinds the habit was very distinct. The Messrs. Veitch also set up two pieces of *Diplopappus*, *D. leptophylla* having a silvered look, and *D. Van-villiersi* of a golden hue, approaching *D. chrysophylla*. Mr. P. Fry, Addington, West Malling, had a group of *Fuchsias* evidently raised from *F. corymbiflora* and *F. fulgens*, all the plants of very low stature as shown. A very beautiful golden *Retinospora*, *R. obtusa aurea* Crippsi, came from Messrs. Cripps, Tunbridge Wells; the plant is obviously distinct from *R. o. aurea*, but the committee desired to see it side by side with that form.

From Sir Trevor Lawrence, Dorking (gardener, Mr. Bain), came a beautiful lot of herbaceous Lobelias, including *Crimson Gem*, *syphilitica rosea*, *igneæ Firefly*, *Carmine Gem*, *British Maid*, a pale salmon-pink, the largest flowered of any of these, though wanting in the spike, which does not fill up readily or well; *sessiliflora*, a good and distinct blue; and *Queen Victoria*, very fine. The last is the green-leaved form and still one of the very finest, as it is also one of the most pronounced of the whole group. Cut flowers of *Clanthus Dampieri* were also shown in some quantity. Another plant, one of the old-fashioned class of a semi-hard-wooded character in *Crocea latifolia*, came also from Dorking. The example was finely grown and flowered, the axils being furnished freely with the purple-pink flowers. *Euphorbia corollata*, a Spurge with numerous small white blossoms, also came from the same gardens. It is scarcely a plant for cutting, but for mixing in the sub-tropical beds in the open it may prove of some service.

Fruit Committee.

From Messrs. G. Bunyard and Co., Maidstone, came a box of remarkably fine and well-coloured fruits of Lady Sudeley Apple from trees twenty years worked. It was remarked that as the trees age they become more fruitful and the size of the fruit increases. From the same source also came bunches of fruit of the Japanese Wineberry to show its free-fruiting and some preserve made from the berries, but seeds seemed to greatly predominate. Mr. W. Cross, Wisbech, sent fine and fully ripe samples of his new Apple Early Victoria. The committee, however, thought the previously granted award of merit sufficed. A fine Melon of thick white flesh and handsome form came from Mr. Hurford, Catel, Guernsey. The inner flesh was found to be too soft and the outer hard, also indifferently flavoured. Another fruit named Foster's Seedling came from Mr. Foster, gardener to Mr. R. Neverson, Hendon. The flesh was scarlet, but being over-ripe, had become unpleasant. A dish of superb Jargonelle Pears came from Mr. Neville, gardener to Lord Chesham, Latimers, Bucks, grown on a south wall and on clay soil on chalk. Mr. W. Mitchell, Farnham Royal, Bucks, sent a dish of a fine Blackberry. An award of merit to it as Mitchell's Seedling was granted in 1897. He also sent a dish of Filberts as Mitchell's Seedling, but it was regarded as no better than other varieties in commerce. Very finely-coloured fruits of Peach Hale's Early, grown on a wall at Balmae, the Countess of Selkirk's residence, Kirkcubright, Scotland, were sent by the gardener, Mr. W. McGuffoy. They were of fair size, and considered to be excellent examples of Peaches from the open wall so far north. Messrs. Harrison and Sons sent fruit and fruiting sprays of the so-called Raspberry Strawberry, *Rubus palmatus* (sorbifolius), also some preserve made from the fruits. This tasted sweet at first, then later somewhat astrin-

gent. The fruits, though fine, handsome, and richly coloured, seemed to be less palatable than are ripe *Arbutus* berries.

Several varieties of Potatoes came from Mr. F. Escombe, The Gardens, Penshurst, Kent. They had been grown on a heavy loam. Most of the samples were much scabbed, and the sender desired to learn the cause and a remedy. It was agreed that the primary cause was less the presence of manure than the absence of lime in the soil, and a fungus created the skin excrescences. It was advised that a liberal dressing of fresh lime be applied to the soil a few weeks before Potatoes are again planted; also that soot and wood ashes be used freely in the furrows when planting. Mr. Escombe was asked to report the effects of such dressing next year. A letter was read from Mr. Harrison, gardener to Miss Thrupp, Merrow House, Guildford, who gave as the name of the Melon conditionally granted an award of merit at the previous meeting Harrison's Hardy Scarlet. He also gave information as to treatment, showing that he had grown his plants quite exposed during the summer for several years. Messrs. J. Cheal and Sons, Crawley, sent heavily fruited plants in pots of an outdoor grown Tomato much resembling the Old Red. The fruits were of uneven and ungainly shape, and were not considered so good as some other popular outdoor varieties in commerce. It was, however, resolved to try the variety at Chiswick next year with others as an outdoor variety. Rather flat samples of what was named Chemin Rouge Tomato, but differing from the recognised form of that variety, and, oddly enough, from those on a bunch of green fruits sent, came from Mr. Broom (gardener to Mr. F. Lucas, New Barnet). Messrs. Dobbie and Co., Orpington, sent preserved Red Dessert and Golden Nugget Tomatoes, very rich, but over-sugared; one half the quantity of sugar would have sufficed. Thirty-four varieties of Onions, nearly all of outdoor spring sowing, were shown by Messrs. Harrison and Sons, Leicester. The samples were, for the season, exceedingly good, and the varieties seemed to be fairly true to name. The globe-shaped varieties were fine, and included bulbs of Ailsa Craig and Excelsior from winter sowings, Banbury Cross, Bedfordshire Champion, Prizetaker, Straw Yellow, and Danvers Yellow, the richest coloured of that hue. The finest rounds and flats were Rousham Park Hero, Nuneham Park, The Aristocrat, and Yellow Rocca; and of the Tripoli section, Pink and White Lisbon, Red Italian, Red Naples, and Globe Tripoli; of reds, Market Favourite, Blood-red, Crimson King, and Crimson Rocca; and of small or early white varieties, White Queen, Nocera, and Marsala. A silver Banksian medal was awarded.

On the proposition of Mr. G. Bunyard, seconded by Mr. P. Crowley, the chairman, it was resolved to have forwarded to the relatives of the late Mr. T. F. Rivers, a vice-chairman of the committee, a vote of sincere condolence with them through Mr. Rivers' death, as also of profound regret from the committee with which he had been so long identified. It was further agreed that in relation to the lamented death of M. Henri Vilmorin, the council of the society be invited to submit to the Fellows at the next meeting a resolution of condolence, as the deceased was one of the most distinguished of continental horticulturists.

NATIONAL CHRYSANTHEMUM SOCIETY.

On Monday evening last the executive committee of this society held its first meeting of the present season at Carr's Restaurant, Strand, Mr. Percy Waterer occupying the chair. There was a large attendance, and after the minutes of the previous meeting had been read, the secretary, Mr. R. Dean, announced that the society had to mourn the loss by death of several of its supporters, viz., Mr. George Fry, of Lewisham, Mr. T. W. Girdlestone, and Mr. J. T. Saltmarsh. Mr. Harman Payne also announced the death of one of the society's honorary Fellows, M. Henri de Vilmorin.

The chairman reported on the subject of a new design for the society's medals, and Mr. W. H. Lees having resigned his position on the classification and schedule committees, it was resolved that Mr. Godfrey, of Exmouth, replace him on the former and Mr. Howe on the latter. Mr. P. Waterer and Mr. Harman Payne were elected as delegates to the meeting of the horticultural section of the British commission for the Paris exhibition of next year.

A report was read from the floral committee containing several alterations in the floral regulations. A sub-committee was appointed, consisting of Messrs. Taylor, Simpson and Moorman, to conduct the details of the annual dinner, which will probably take place towards the end of November.

Thirty new members were elected, and local societies at Bideford, Southend and Wellingborough were admitted in affiliation.

NOTES OF THE WEEK.

Dipladenia Sanderi.—The medium-sized flowers of this species, while not equal to those of *D. amabilis* or the like, are certainly very beautiful and delicate in colour—a soft rose-pink. It is unfortunate that the species, judging by a plant seen at the Drill Hall this week, is a poor and weakly grower.

Bouvardia Humboldtii grandiflora.—Nice batches of this were brought to the Drill Hall on Tuesday by Mr. H. B. May, but, so far as could be determined, the variety is scarcely so free-flowering as the older form. If this is characteristic, the slight increase in the size of the flowers will not prove a great gain.

Abutilon Golden Fleece.—The golden flowers of this plant are of a very distinct hue, such as can hardly be compared with gold usually as a colour. All the same, it is a very beautiful shade and showy, while the great freedom and profuse flowering of the variety in every way fit it for use in the conservatory, the greenhouse, or even in beds in the open air.

Sunflowers.—Notwithstanding the great heat there is promise even now of a good display of these things now that a little rain has come. But there is a superior look in those plants that have been either planted quite early this year or only been in position for one year. Older clumps are greater sufferers, showing the wisdom of periodical planting with such of these as is possible either in autumn or quite early in the year.

Tritoma Uvaria.—I enclose a photograph of a bed of Tritomas growing here. There are four large groups, one in each corner of the each court, which make a magnificent display when in bloom during the autumn. The severe winter frosts try these plants if left unprotected. In November I always give the beds a good covering of long stable litter, which is taken off in March and a good dressing of half-rotten manure given them.—G. J. SQUIBBS, *L'Angelwyn Hall, Oswestry*

Lobelia Queen Victoria.—Since the introduction of this fine kind many varieties have been added to the group, and while many of these are possessed of considerable merit, few, if any, have surpassed this kind from an all-round point of view. This is particularly true of those nearly allied in colour, for while many are distinct and even more vivid, few surpass the old variety in habit or in freedom of flowering. Unfortunately, it has not been an ideal year for these moisture-loving plants, and in some gardens they are quite a failure.

Tropæolum speciosum.—One hears so many complaints of the difficulty of growing *Tropæolum speciosum* that it may interest some of your subscribers to learn how it will grow if left alone. A Spruce Fir hedge about 10 feet high and 40 feet long in my kitchen garden is covered with it. My gardener put in a small number of the roots at the back of the hedge some years ago and it has never been disturbed since. It has rambled all over it back and front, and when in flower is very beautiful. The blue berries later on are also very fine.—H. HAMILTON, *Pinnmore, Daljarrock, Ayr, N.B.*

Thrips on flowers.—This season thrips have been unusually abundant, and in the dry weather which has been prevalent they have destroyed the beauty of a number of plants. Gladioli have

been especially infested by them, and it is very disappointing to see how soon the flowers become spoiled by the swarms of thrips which cover them.—S. A., *Dumfries, N.B.*

Crowea latifolia.—This old-fashioned plant, which was brought to the Drill Hall on Tuesday last by Mr. Bain, gardener to Sir Trevor Lawrence, Dorking, in capital condition, served to remind not a few of the times when hard-wooded and allied subjects were freely and well grown. Indeed, this *Crowea* was usually among the exhibition plants of thirty or forty years ago, but, like not a few others equally good, it has been put aside for the time being. That such plants will occasionally appear to refresh the memory there is little doubt, and if as well grown as the example now referred to, will be welcomed by old gardeners, if not indeed by those of the modern school.

Nepenthes at the Drill Hall.—It is doubtful whether, from a cultural point of view, finer specimens have ever been shown at the Drill Hall meetings than those brought by the Messrs. Veitch on Tuesday. The plants were splendid examples of their kind, and it mattered little whether species or garden hybrid, the same excellence prevailed throughout. The pitchers were in not a few instances like huge goblets. Great vigour and great freedom also appeared to go hand in hand with these striking and picturesque plants. Fine examples bearing twenty to thirty, and in one or two instances three dozen, fully-developed pitchers were noted in many cases.

Polygonum baldschuanicum.—It is gratifying to see this beautiful climber coming into notice. The neat and attractive habit, together with the mass of blossoms produced over so long a period, will suggest the varying uses to which it may be put. In two collections of hardy things the plant was noticed at the Drill Hall this week, and there is no doubt that a stock will be quickly forthcoming, most probably from seeds. The propagation of the plant by cuttings has hitherto in some instances not been a success, though it is extremely probable that layers would root and thus form large plants quickly. Should this prove to be the case, there is ample material provided by a large plant to produce a hundred, and in this way a plentiful supply would soon be forthcoming. For covering balconies, rustic poles or the many ill-shapen or decrepit trees and shrubs one is constantly seeing, this plant is well suited.

Notes from a Cornish garden.—*Gladiolus Senateur Volland*, flowering here for the first time, has attracted much notice. *Eucomis punctata* has given us nine flower-spikes and is greatly improved by having been shifted last autumn. The clump has been here some forty years, and seldom gives more than four flower-spikes. *Senecio pulcher* has had forty-five flowers on one plant, and *Cyananthus lobatus* over fifty flowers on one plant. *Rudbeckia Golden Glow* has maintained the character lately given it in THE GARDEN, and now this week R. Autumn Glory is out, and will take the place of R. maxima. R. purpurea seems likely to last in flower a long time. A *Solanum* sent here as arboreum is flowering for the first time. One or two visitors have told me it is not this, but no one has decided what it is. *Callirhoe involucrata* and *Tournefortia heliotropioides* are flowering profusely in the rock garden.—C. R.

The old Crimson Clove.—In reference to "N. N.'s" article about this being so rarely met with, I was surprised to hear how badly it does in most places and so little grown. Here at Llangedwyn it does well. I grow it in large quantities, and it flowers very freely during the season. I am also able to save seeds from it every year and get some very pretty shades of crimson. Most of the seedlings come true to the old stock. I think most of the failures can be attributed to late layering and late planting, so that the plants have not time to get established before winter sets in; consequently they are lifted out of the ground by the severe frosts and never

pressed back into position when the thaw comes, and so they perish. I always finish layering by the first week in August, then by the end of September they are nicely rooted and ready for re-planting. I prefer leaving some to flower the second year, as I get a greater profusion of bloom for cutting from two-year-old plants.—G. J. SQUIBBS, *Llangedwyn Gardens, N. Wales.*

Lathyrus latifolius albus.—Very few hardy climbing plants can surpass this for freedom of flowering. This is particularly true where the plants are old and well established. A very remarkable instance of this plant came under notice quite recently in a market nursery which runs beside a deep railway cutting. The limit of the company's property is marked by their usual four-barred fence and posts, and to make the most of the fence, or rather the space at disposal, plants of the Everlasting Pea had been planted at a few feet apart along an extensive line of some 300 yards or 400 yards. The plants were merely looped to the fence by strong cord, and have for many weeks in succession provided an untold wealth of blossoms, and of not a little value, seeing the cost of production is trifling. The plant in question is such a favourite, that private gardeners might imitate this method even if on a smaller scale. There are certain positions in almost every garden where a sort of floral fence such as this suggests would not only prove attractive, but valuable, for long sprays of flower and foliage could be cut intact, and these of a pretty and useful kind. In such positions the plants if given room root deeply and give but little trouble.

Tritonia rosea.—One generally finds this catalogued as *Montbretia rosea*, and it has also been known as *Tritonixia rosea* in addition to other names. That given above is that now recognised at Kew. I think a note upon it as a hardy garden plant may prove useful to some. This remark is, however, made subject to the statement that its beauty is, perhaps, better seen as a cut flower than when growing in the garden, where its rather pendulous habit does not show the flowers to advantage, and where its soft rosy pink blooms are made less effective by contrast with the more gaudy hues of so many autumn flowers. In its general appearance it is not particularly like our better-known *Tritonias* or *Montbretias*, as it is of much looser and more graceful habit. The flowers are of a pretty shade which I have ventured to call "rosy pink," although it has been described as "rose-red." It has been under my observation in South-west Scotland for several years, and appears to be hardy if planted with the crown of the corm about 3 inches below the surface of the soil. It has been in my own garden for about three years without protection of any kind, and is now increasing at the roots besides giving plenty of bloom. Not its least recommendation is the length of time it flowers; here it blooms some time before *Tritonia Pottsi* and the hybrid *Montbretias*, and continues to produce its flowers as long as they do.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Helianthus decapetalus.—A dry season has, with all its disadvantages, the compensation of enabling us to see some plants under a new and more pleasing aspect. The Ten-petalled Sunflower—rather a misnomer, as the number of petals is irregular—is one of those. It appears to revel in the drought and in the brilliant sunshine which has of late been so overpowering to many. I have been particularly struck with the beauty and apparent happiness of a clump lifted in spring in the course of some garden alterations. A portion was replanted, but the remainder, with what soil was attached to the roots, was set down on the top of a part of the vegetable quarters so that someone might have it. It has remained all the summer, and is now much more beautiful than the plants which were properly planted in the borders. This has been a little surprising to me, as I have found that some of the Sunflowers not only resent drought, but are even much weakened by a continuance of dry weather. The flowers of *H. decapetalus*, although

comparatively small when compared with those of *H. multiflorus*, are light and graceful. A few arranged loosely in a glass or vase look very well in the house. They last well in water if cut before the disc flowers have quite expanded. They are, moreover, so freely produced that one has no compunction in cutting them, as is sometimes the case with plants which do not give a succession of bloom.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Antholyza paniculata.—One is glad to observe that this distinct-looking plant is gradually finding its way into good gardens, where it will do much to induce others to grow it in groups. Casual observers think it a *Montbretia*, and although those who notice plants more carefully see much difference in the general appearance, one is not surprised at the mistake. It belongs to the same natural order—that of the *Iridæ*—and those who wish for a full botanical description cannot do better than refer to Mr. J. G. Baker's "Handbook of the *Iridæ*." It is not named in the "Dictionary of Gardening." Botanical descriptions do little, however, to bring home to those who care for flowers the effect produced by the panicle *Antholyza*. Its broad, plaited leaves are very beautiful and effective, and even when the plant is not in bloom almost invariably attract notice. Then when in flower the deep crimson blooms are so formed and arranged as to give a distinct character to the plant, that is to those who can detect the by no means small differences between it and the *Montbretias*. This *Antholyza* is a native of Natal, where, Mr. Baker tells us, it was first gathered by Gerard. One has some difficulty in saying how far it is hardy in cold districts. In such it would be well not to plant the corms until spring the first season, and to cover the place in after winters with litter, but in this district one does not find this necessary, and clumps increase almost yearly in size and in grandeur.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

OBITUARY.

M. HENRI DE VILMORIN.

WE greatly regret to announce the death (suddenly) on August 23 of the best known figure among the horticulturists of Europe, M. Henri de Vilmorin, known to many of our readers for his public work as well as in the intimacy of private life. M. Vilmorin was one of a family of several generations devoted to horticulture, and to whom we are much indebted for their publications as well as excellent cultures in their always interesting gardens at Verrieres and elsewhere. His father having died young, he himself took his place at the head of the firm at a very early age, and well he acquitted himself of that task. He also continued the scientific studies in agriculture and horticulture to which his father had devoted his life. These included the improvement of wheat, oats, beetroot for sugar, vegetables, hardy plants, &c.

Among the numerous works left by M. Henri de Vilmorin may be mentioned "The Best Wheats," the first important one published in 1880; a pamphlet, "The Best Wheat to Cultivate," read at the Millers' Congress in Paris in 1887 and in the winter of 1890-91; a methodical and synonymous catalogue of all the Wheats composing his collection; "Experience of Growth of the Different Wheats," communicated to the Botanical Society of France; "The Best Potatoes," read at the general agricultural meeting at Paris in January, 1890; "The Methodical and Synonymous Catalogue of Potatoes," being the personal collection of M. H. de Vilmorin; "Vegetable Garden Plants," a very important and extensive work, in which vegetables of all kinds and varieties are fully described; "Plants for Extensive Cultivation, with descriptive notices of the use, quality, and cultivation of different kinds of forage and cereals, whether for commercial or eco-

nomical purposes." There also appeared a note from M. de Vilmorin in 1879 on his "Experiences regarding the origin of vegetables." This was sent to the National Society of Agriculture in France. "Study on Wheat Mildew: its nature, favourable conditions for its propagation, and the best means of fighting it;" "The price Wheat cost the U.S. of America," a report of the mission entrusted to M. de Vilmorin by the administrative council of the Agricultural Society of France; and "Flowers of the French Riviera," published in 1893 in the journal of the Royal Horticultural Society. "The Chrysanthemum: its history and culture in France and abroad;" "Vegetables for cultivation on a large scale," paper read at a conference held at the Agricultural Congress of Troyes, in June, 1892. M. de Vilmorin was an important member of the Council of the Society of Agriculturists of France, of which he was the founder. He was vice-president of the Botanical Society in 1881 and president in 1889. He received the *laureat* and gold medal at the meeting of the agriculturists of France in 1882 for his researches on the cultivation of the Beetroot for sugar. He also wrote papers on "Temporary Meadows," on "The Culture of Tobacco," "An Account of the Varieties of Oats," "Pasture Grounds," "Wheat Culture," "Choices of Plants for Pasture," "The Amelioration of the Beetroot Industry," "Early and Late Seeds of Wheat," "Potato Cultivation," "Cultivation in America," and "A Study of *Lathyrus sylvestris*."

M. de Vilmorin was also a contributor to a large number of horticultural and agricultural journals in France and other countries. He was French representative of the Government at the International Exhibition at St. Petersburg in 1899, and a Chevalier of the *Légion of Honour*. Like most of his family, he was a very good English scholar and a frequent visitor to our country.

The weather in West Herts.—Still another warm week and the eighth in succession. On four days the temperature in shade rose above 80°, and on the 25th ult. reached 87°, or exactly the same reading as was registered by the same thermometer ten days previously. On the 29th ult. the highest temperature was 67°, which is only a few degrees below the average for the time of year. Nevertheless, so persistently warm has the weather lately been, that even this moderate reading caused that day to be remarkable as the first cool one for over five weeks. The ground is not quite so warm as it was a few days ago, but at the time of writing is still 6° warmer than the average both at 1 foot and 2 feet deep. Rain fell on two days, but the total measurement amounted to less than a quarter of an inch. No measurable quantity of rain-water has now come through either percolation gauge for a month. On the 25th ult. the air was singularly dry throughout the day, and at 3 o'clock in the afternoon the difference between the readings of an ordinary thermometer and one with its bulb kept constantly moist amounted to as much as 19°, indicating a very low degree of humidity indeed for so late in the summer.—E. M., *Berkhamsted.*

BOOKS RECEIVED.

"Cultivated Roses." Illustrated. W. H. and L. Collingridge, 148 and 149, Aldersgate St., E.C.

Climbing Roses—Will someone kindly tell me if any, or all, of the following Roses would climb posts 11 feet high and then run along 11 feet on an arch across a path: *Laure Davoust*, *Charles Lawson*, *Kaiserin Friedrich*, *Mme. Alfred Carriere*, *Rêve d'Or*, *Vivid*, *Coupe d'Hebe*, *Gloire de Bordeaux*, *Desprez à fleurs jaunes*, *Blairi No. 2*, *Mme. Plantier*, *Souvenir de Mme. Metral*?—S.

Names of plants.—*M. M.*—*Carthamus tinctorius*.—*S. T.*—1, *Rosa caroliniana*; 2, *Geranium Eudresii*.—*Mrs. Wood*.—*Colutra cruenta*.

Name of fruit.—*Oakenhead and Co.*—Apple Hawthornden.

THE GARDEN.

No. 1151.—VOL. LVI.]

[SEPTEMBER 9, 1899.

INDEX.

(Illustrations in Italics.)

Flower:—		Pea insecticide, a 156	Cattleya Harrisoniae 202	Park and Woodland:—	Helianthus rigidus semi-
Clematis integrifolia 194	Potato Renown 196	Cattleya Mendeli 202	Epidendrum cuspidatum .. 202	Plant, where to 207	plenius 211
Dahlia, Cactus, Fantasy .. 195	Salads, scarcity of 195	Odontoglossum Harryanum .. 201	Odontoglossum Wallisi .. 201	Roses:—	Kniphofia Nelsoni 211
Dahlias, Cactus, for garden .. 194	Salads, winter and spring .. 195	Oncidium macranthum .. 203	Oreohids, natural hybrid .. 201	Rose Climbing Kaiserin Augusta Victoria 209	Lilium spectosum Melpomene .. 211
Euphorbia corollata 195	Turnips, winter 195	Warrea tricolor 201		Rose Ulrich Brunner 208	Linaria vulgaris var. Peloria .. 211
Geranium Crystal Palace .. 195	Vegetable Marrows 196			Rose Violoniste Emile Leveque 209	Plums, Pershore 211
Lathyrus Drummondii 194				Rose Xavier Olliho 209	Sun Rose, the Carton 212
Nymphaea stellata in the .. 193	Orchard and Fruit:—	Garden Flora:—	Epiphyllum Makoyanum .. 202	Roses at the Crystal Palace .. 209	Verbena Ellen Willmott .. 211
Nymphaea stellata in the .. 191	Aphis, the woolly 200	Epiphyllums 202		Roses, pegging down 208	Yucca filamentosa 211
Pelargonium, triolor 194	Fruit trees, summer pruning .. 200	Week's Work:—		Roses, pillar 209	
Petunias 194	Gooseberry Green Champagne .. 199	Fruite, outdoor 204		Societies:—	Obituary:—
Plants, fine-foliaged, in the .. 194	Gooseberries, ripe 199	Kitchen garden, work in the .. 203		Dahlias at the Crystal Palace .. 210	Johnson, A. 212
Verbenas, blue, and white .. 194	Grape Foster's Seedling .. 200			Royal Horticultural Society .. 211	
Sticks 194	Grape Gros Colman 199	Fruit and Vegetable		Notes of the Week:—	Miscellaneous:—
Kitchen:—	Peach Sea Eagle 200	Crops 201		Aclypha hispida 211	Cordylone (Dracena) australis .. 203
Asparagus, feeding 196	Peach trees, red spider on .. 199			Arundo conspica 211	Cordylone in flower 203
Beans, dwarf Kidney 195	Plum Pershore 193	Trees and Shrubs:—		Baden-Baden, notes from .. 212	Cosmos, new seedling 197
Beans, runner 196	Plum Victoria 201	Olearia Haasti 206		Campanula pyramidalis .. 211	Flower creations in California .. 197
Broccoli crop, autumn 195	Strawberries, late 198	Olearia Haasti 206		Chelone obliqua 211	Hybrid fruit of Cereus columbianus x Phyllocactus Aker-
Cabbage, small early spring .. 196		Rhus Cotinus 206		Chrysanthemums, pot 212	manni 197
Lettuces, hearting 196	Orchids:—	Rubus phaeocolasius 206		Galtania candelina 211	Plants, names of 212
Pet Dwarf No Plus Ultra .. 195	Aerides multiflorum 201			Helenium striatum 211	Shipley Hall, notes from .. 212
	Cattleya aurea 202				W. Herts, weather in 212

FLOWER GARDEN.

NYPHLEA STELLATA IN THE OPEN AIR.

ON page 151 of THE GARDEN of August 19 Mr. Burbidge records the interesting fact that *Nymphaea stellata* is flowering in the open air at the present time at Carton, Kildare, in Ireland, without the assistance of warmed water or shelter of any kind. This is not, however, the first time that this has happened in the British Isles. Two years ago I saw *N. stellata* var. *zanzibarensis* in flower in the garden at Buckham Hill, in Sussex, at the end of September or the first week of October. It had been flowering there freely without any protection of any kind during the summer, nor was the water warmed in any way. It was growing in a small pool in a position naturally sheltered and sunny, the sloping banks of a rock garden rising round the pool. *N. s. zanzibarensis* has smaller flowers than the variety of *N. stellata* to which Mr. Burbidge probably refers as flowering at Carton, and it is also much darker in colour, even the anthers being shaded with bluish violet. It is a richer looking flower than *N. stellata*, though fine forms of the latter, such as the lovely pale blue Berlin variety, are probably more beautiful. It may be said that the forms of *N. stellata* and *N. s. zanzibarensis* that are met with differ very much in quality, particularly the latter variety. It is comparatively rare, I think, to find the rich intense blue with the violet anthers that we associate with the true form of *zanzibarensis*. Perhaps this may be explained by the fact that it is usually treated as an annual and raised year by year from seed, when, of course, deterioration frequently occurs. I saw quite recently a large batch of seedlings of this variety; several were in flower, but one was decidedly superior to the rest, much richer in colour. It is not surprising to hear of the flowering of *N. stellata* in the open air in this country without assistance other than that afforded by Nature when *N. zanzibarensis* has previously done the same, for the difference in the conditions which are favourable to them correspond to the differences between the climates of the river Nile and Zanzibar

respectively, or more generally to the difference between North-east Africa and the eastern part of Central Africa, in which places these varieties are to be found. I only know of one other instance of the flowering of blue *Nymphaeas* without assistance or protection on this side of the Channel, though it has been an ordinary occurrence for years past in Southern Europe. The second case has occurred in the garden of Burford Lodge, Dorking, where so many choice plants and flowers are to be found. Last year Mr. Bain planted *N. stellata* in a tub sunk in the ground and grew it in the same way as he grows the hardy coloured Water Lilies. It flowered well when treated in this way. This year Mr. Bain has gone a step further and has flowered *N. s. zanzibarensis*, treating it in the same way as the other kinds, no protection being afforded nor any circulation of warm water through the tubs being maintained, though the roots would derive a little additional warmth from the fact that the tubs are sunk in the ground.

Last year I saw *Nymphaea stellata* flowering fairly well in the pond at Kew, which has been specially constructed for the growth of the hardy Water Lilies, but I believe that this pond is provided with a supply of warm water from the pipes of some hothouses in the vicinity. At Gunnersbury House *N. stellata* has flowered in a tank in the open air both last summer and this summer. The tank is supplied with warm water from the pipes of an adjacent range of pits, so that a bottom temperature of about 70° F. is maintained. No protection is afforded in the summer, but a glass frame was placed over the tank during the winter months. Under these conditions the blue *Nymphaeas* flourish exceedingly, so that more than half a dozen flowers may frequently be cut from a single plant. *N. s. zanzibarensis rosea* is flowering in this tank at the present time as well as *N. stellata*, and bears exceptionally large flowers. Last summer *N. Daubneyana* flourished in this tank, and continued to flower until Christmas under the glass frame. It continued to grow in that position, until this year it was moved to the lake and placed amongst the hardy varieties, but it has not flowered yet. It is a very distinct variety, much purer than

N. stellata, as we should expect from the fact that it is a hybrid between the latter and a white variety.

Though we cannot from these facts conclude that blue Water Lilies may be grown successfully during the summer months wherever the hardy kinds flourish, still it should encourage all enthusiastic growers of *Nymphaeas* to make experiments to test the possibility in their own case. Strenuous efforts are being made to raise a hardy blue Water Lily, but it now appears that, without waiting for this to be achieved, some at least of our beautiful water gardens may have their charms enhanced to a high degree by the culture of varieties waiting to be used. Charming as are many of the new varieties given to us by M. Latour-Marliac, none are more beautiful than the better forms of *N. stellata* and *N. s. zanzibarensis*, both of which are very pure in colour.

Except for the pretty little Forget-me-not that haunts the banks of our native rivers, blue is the colour most wanting at present in our water gardens. We have the *Eichornias*, crassipes and azurea, but these are so tender that their beauty is rarely seen, and *Pontederia cordata* is not a very effective plant. This makes *N. stellata* all the more welcome, and it is to be hoped that it will prove as successful in many instances as it has already done in a few.—J. F. HUDSON.

— In THE GARDEN of the 12th and 19th ult. I was interested to see mention made of hothouse Water Lilies flowering in the open. Mr. Alfred Wallace states that he has heated the water artificially. I do not find this to be necessary, though in a tank in the Orchid house the flowers of *Nymphaea stellata* and *N. zanzibarensis* are larger than those grown out of doors, where there are flowering here *N. stellata*, the pale blue, *N. zanzibarensis*, the dark purple-blue, and *N. Devonensis*, the crimson, all named as hothouse *Nymphaeas*. These are put out into the open pond in May or June, and taken up in October or November, though during that long and severe winter about five years ago a plant of *N. stellata* left out by mistake lived through the cold and budded, but did not fully flower the following autumn. Together with these there are several kinds of

hardy Water Lilies of different colours and the pretty little yellow *Limncharis Humboldti*, which I brought from Madeira and have found to be hardy; in fact, it spreads almost too much. I hear surprise expressed that Arum Lilies should do well in ponds in the open. I find them quite hardy, and they flourish and flower well. The three hothouse Lilies require a sunny situation even more than the others.—E. H. THURLOW, *Buckham Hill House, Uckfield, Sussex.*

Petunias.—These have gained much favour during the last few years. Thirty years ago named varieties were held in esteem by the majority of gardeners, but all at once they seemed to fall into the background. Though comparatively easy of culture, there are a few important details which must be observed if success is to be achieved. I think better results are obtainable if the plants are not raised too early in the season, as when in full bloom at midsummer the flowers frequently become distressed from a tropical sun. The cooler dewy nights and mornings suit the plants admirably, and if the beds are mulched and well supplied with moisture, the root-run being rather poor than rich, a long succession of bloom will result. Too rich ground induces a gross, barren growth. A sandy loamy soil kept cool and moist by a liberal and timely mulch is what Petunias like.—C. N.

Blue Verbenas and white Stocks.—There is one thing about seedling Verbenas which particularly strikes me, and that is their vigorous habit of growth. The flowers obtainable from the best strains are very large and the colours good. A week or so ago I saw a grand bed composed of white East Lothian Stock and blue Verbenas, the latter having a white eye. There was an entire absence of stiffness about the arrangement, and the fragrance of the Stocks was delicious. I think Verbenas are often subjected to too much heat. It is all very well to place the seed-pans in a fair heat till germination takes place, but after this an intermediate house is the most suitable till the seedlings are fit for potting off. After this an ordinary greenhouse temperature is what Verbenas like until it is safe to harden them off either in cold frames or pits. Well treated, Verbenas not only bloom profusely, but over a long period; indeed, till cut down by frost.—B. S. N.

Tricolor Pelargoniums.—I read with interest "A. D.'s" note (page 131) on this once very popular class of Geraniums. I have never grown Mrs. Harry Cox, referred to by him, but feel sure that it must be an excellent variety if, as "A. D." says, it surpasses Mrs. Pollock. The latter is a grand variety when well grown in a not too warm, moist atmosphere and fully exposed to sun. It should have an open, sunny position in the flower garden, and should not be planted in a very rich soil. A poorish root-run prevents grossness and secures rich colour. I lately saw Mrs. Pollock in a spoiled condition through being repeatedly fed with liquid manure, the plants being grown quite out of character and the colour very poor. Years ago in Essex I used to bed out Lady Cullum and Sophia Dumaesque, both gorgeous-leaved varieties, the former a good bedder, but I have seen neither of these for some years. At one time also there was a class for tricolors at most exhibitions, and a good deal of skill was needed to produce good-sized trained plants, but these were always much admired.—J. C.

Clematis integrifolia.—The beauty of the more effective *Clematis heraclefolia* var. *Davidiana*, better known, perhaps, as *C. Davidiana*, is apt to cast still further into the shade the old *C. integrifolia*, already too little grown. This, should it happen, will be unfortunate, as the latter has many good qualities, although brilliancy of colouring cannot be included among them. One may go through a good many gardens without seeing it, and I find that a number of people who see this *Clematis* in flower have not met with it

before. This is not due to its novelty, as it was in cultivation in 1596, but simply to the neglect into which many old flowers fell in the rage for bedding out. As already indicated, it is not brilliant in colour, yet one finds its deep blue hooded flowers with white centre appreciated in the garden as well as coming in usefully at times with other flowers when cut. It is one of the non-climbing Clematises with herbaceous habit, and is said in books to grow from 1 foot to 2 feet high. The type grown almost everywhere appears, however, to attain to a greater height, and even in this dry soil and in a dry season it becomes considerably taller. This year—one not particularly favourable to the growth of plants—it is a little over 4 feet high, and one has seen it at least a foot more in some gardens. When exposed to wind it requires staking, but is a somewhat difficult plant to fasten to a support without destroying its beauty in some degree. There are several varieties of this Clematis. One of these, raised by M. Lemoine, of Nancy, has been named *pallida*, and the same eminent hybridist has given us some hybrids of which *C. integrifolia* is one of the parents. There is, I believe, a white variety, but this seems to be rare, and I cannot at present find it in any catalogue I have at hand. *C. integrifolia* may be grown from seeds or increased by division, but the latter is not an easy process, as it forms a very hard root-stock, difficult to divide without lifting the whole plant. Although not showy, *C. integrifolia* is a pleasing plant over a considerable period.—S. ARNOTT.

FINE-FOLIAGED PLANTS IN THE FLOWER GARDEN.

BESIDES what is termed sub-tropical bedding when Palms and other tender plants are brought out in summer, we have a number of very suitable plants for flower garden decoration that are much more quickly and easily grown. The flowers of many of these are quite inconspicuous, but that is a minor detail for their very striking foliage makes up the deficiency, while if boldly and effectively planted they are more lasting and equally as beautiful as the best of flowering plants. A plant that has fine foliage, a handsome contour, and very pretty flowers is the Thorn Apple, and the fruits are also very striking. Perhaps some growers have been afraid of its poisonous properties, but a good deal of this is simply alarm. I do not remember a prettier combination with the Stramonium than one I planted some years since and that was *Gladiolus Brechnleyensis* with a good scarlet kind of the *gandavensis* type to follow. How often one hears complaints from gardeners of all these large beds to fill and no big stuff to fill them with. The plant named is as pretty as anything for a large bed and the number of plants that go well with it is very great. It is simply a good green and white and its fine tubular blossoms alone would make it worth growing. *Datura Stramonium* is without a doubt a very much neglected plant, and worth a trial in places where room for wintering bedding plants is scarce, and where pretty and natural effects are liked better than stiff or glaring arrangements. The Castor-oil plant is better treated by gardeners, but even it has not had the attention it deserves. It is more tender than the last-named, but the metallic-looking bronzes and steely greens in various of the named kinds are fine in positions where more showy plants would be out of place. To get the proper effect from a *Ricinus*, the plants should be carefully grown and hardened previous to setting out and never starved. Then, if planted sufficiently far apart, they will make immense specimens with rich lustrous foliage, quite different from the lanky bits so frequently seen in flower gardens. The more recently-introduced *Nicotiana sylvestris* is, I think, going to prove a very valuable aid to those who like the kind of gardening mentioned. Even on quite a poor soil here its leaves are already of very striking proportions, and all who have seen it in flower speak very highly of it. The foliage is the

thing, of course, but when joined with beautiful flowers the plant is all the more worthy. Cannas, again, are well known and beautiful plants for the purpose, and although it is a little outside the scope of this note, I would like to mention a pretty bed I saw recently. This was composed of rather tall well feathered plants of *Grevillea robusta* with a fairly thick carpeting of the new *Rudbeckia Golden Sunset*, an inaptly named, but very pretty annual.

It is necessary in all arrangements where large-leaved plants are used to make the soil good. A rich soil at first and repeated waterings until the plants are established are needed, then when the roots get hold of this, progress is very rapid, and the summer sun brings out to the full the beauty of the leaves. Unless the plants are made self-supporting much of their beauty is lost, but this is easy, and the effect is much more lasting than the majority of floral bedding arrangements.

LATHYRUS DRUMMONDI.

"R. D." speaks of this as being related to *L. rotundifolius*. I have always been under the impression that these names were synonymous, but, if not, can "R. D." say in what way the two plants differ? The Pea I have grown for a good many years under the name of *L. Drummondii* is very bright in colour, but it cannot be called scarlet. It is distinct in colour from any other flower I am acquainted with, and for this reason I find that it invariably attracts the attention of visitors who see it for the first time. My stock plant is about 5 feet across, and never exceeds 6 feet in height. It was planted about ten years ago, and would be twice the size it now is had I not used it freely for propagating from. Although this Pea blooms with great freedom, it yields seeds very sparsely, and unless these are sown at the right time they will not germinate. This is the reason why such a distinct and ornamental hardy flower is not more frequently seen. When I first came into possession of this Pea I wished to obtain a good stock of young plants, and naturally had recourse to seeds, but I could not get enough and tried root cuttings, which I found much more satisfactory. The seeds of this *Lathyrus* are harder than those of any plant I am acquainted with. They are so hard that they might easily be mistaken for pebble stones. When kept until spring they remain in the soil until the following year before germinating, and frequently will not come up at all. If sown in September and kept in a frame or cool house, nearly every seed will come up in the early portion of the year. The young plants should remain undisturbed until the following spring, when if set out in good soil they will bloom the following July. The first lot of plants I raised in this way I set out the first season and they would not go away into growth, many of them eventually dying. Those of your readers who want something distinct for conservatory decoration in early spring should grow this Pea in pots. It will bear gentle forcing, and plants in 8-inch pots, 3 feet high and as much through, have a fine appearance when in full bloom.

Byfleet.

J. CORNHILL.

Cactus Dahlias for garden decoration.—The small spring-struck bits sent out by nurserymen and Dahlia specialists may be all very well for feeding up strongly and getting a few large show flowers from, but for garden decoration there is nothing like splitting the old roots up into two or three and planting these out into prepared stations after gently starting them. The plants make rich masses of foliage and flowers that are very pretty, though in some seasons the Dahlia season is short. The Cactus varieties are prettier far than the show or fancy section, and even the little pompon varieties have not the same graceful habit and flowers. But there is a danger that in seeking after size our raisers will give us varieties absolutely useless for the purpose. Some five or six years ago a new half-dozen was sent out from a well-known firm who make the raising of

Dahlia a speciality, and these came into my hands the next season. Not one would throw a single flower above the foliage, but underneath the large leaves the blossoms were really magnificent. I am not one of those who think that a well-developed bloom of anything, be it a Chrysanthemum or Dahlia, is necessarily ugly, but I do think it is a mistake on the part of gardeners who do not grow for exhibition to use these new kinds for garden decoration. I admire a well-grown, large Cactus Dahlia immensely, and this is more than I can say of either the show or the fancy kinds, which, no matter how large or well grown, can never be called pretty. But for making a display in the garden I never grow any a second time that hide their beautiful flowers under the leaves.—A GROWER.

NOTES AND QUESTIONS.—FLOWER.

Cactus Dahlia Fantasy.—This variety pleases me more this year than it has done before. It is wanting in one thing—that is, a longer flower-stem. The arrangement of its petals is so light and distinct from that of any other, that in a cut state it has quite a dainty look surrounded by fern. The colour is deep coral-red.—H.

Euphorbia corollata.—If not an attractive species to the eye at first sight, there is certainly a use for this free-flowering Spurge if arranged among fine-foliaged things in beds in the open ground. This is so not only by reason of the blossoms, but, perhaps, even more so on account of the greyish foliage and the general tone throughout.

Geranium Crystal Palace Gem.—This golden-leaved Geranium has stood the test of time, and is still about the most popular of its class. It is a capital grower and has a very striking appearance in a mass. True, the individual flower-truss is small compared with that of other sorts, but the colour is delicate, and on a fine sunny day the golden foliage shows off to advantage.—J.

KITCHEN GARDEN.

WINTER TURNIPS.

OWING to the protracted drought there will be few breadths of winter Turnips sown at this date, at any rate in the southern parts of the country, and in large places where quantities are needed some means must be adopted to secure a crop. It is an easy matter to get the seeds to germinate, but not so easy to assist growth afterwards. I adopt various means. Doubtless the best is to damp the plants overhead at night. The fly does not like moisture, and if it can be kept at bay there will be fewer losses. With August approaching the end we get cooler nights with shorter days, and the moisture will be retained longer. Should the fly make its appearance, it is advisable to dust over after watering with wood ashes mixed with fresh soot. This mixture is distasteful, sticks to the plants and will keep growth active. A much richer soil may be used in such seasons as this for Turnips. I find that by using cow manure moisture is better retained in a light, porous soil and there is a gain in sowing in deeper drawn drills than usual. In deep drills the tender seedlings get more shade and are less affected by drying winds, and as the plants bulb it is an easy matter to fill in the drill by hoeing or raking. When once the land gets well moistened by an ample rainfall growth will be rapid owing to the great warmth in the soil, so that large sowings need not be made in the way advised, merely small ones to keep up the supply. Land should be held in readiness for later sowings. I do not think Turnips are needed larger than a cricket ball, and if sown in September the roots will be large enough. Small roots keep better, are sweeter, and more solid. Should there be

any deficiency, it will be well to sow a few rows of the Early Milan type for present use. These do not keep, but they provide roots weeks in advance of the winter kinds, and a small quarter can be covered over, so that germination is more rapid. Now is a good time to sow the yellow-fleshed Turnips, as these are hardier, keep longer, and the quality is equal, indeed often superior. One I grew last season named Yellow Perfection is of great value as a winter Turnip on account of its small top and quick growth. This sown early in September will be ready in October. Golden Ball and the older Orange Jelly are both good. In the white section for keeping, no variety I have grown is equal to Red Globe. In the north the Green-top Stone varieties find most favour for summer and the yellow-fleshed for winter. G. WYTHES.

Forwarding open-air Tomatoes.—Should rainy weather set in, plants bearing ripening fruit should be protected by means of odd spare lights in order to prevent cracking; indeed, where the fruit is only in a half-developed state the same covering will be instrumental in hastening it on to maturity. From henceforth it will also be best to abandon the use of stimulants, this tending to promote growth rather than to hasten on the fruit. Keep all laterals closely pinched off, and thin out, though with discretion, the old foliage where at all crowded. It must be borne in mind that where lights are used no rain can reach the plants, so that regular supplies of water must be given, especially where the plants are in pots plunged in the border.—C.

Scarcity of salads.—I never knew such a scarcity of Lettuce at this season of the year owing to the great heat and drought. There is no lack of Lettuces in the north, but, I fear, few of them reach the London market, as in shops a short distance away from Covent Garden good Cos Lettuces are selling at sixpence each; indeed, even at that price they are difficult to obtain. In Newcastle I saw an ample supply of excellent Lettuces. We can grow Endive fairly well, and this is a boon in such seasons. This is best grown where sown in light land. Lettuce would be more plentiful if grown thus, as the transplanting breaks the tap root and the plants make poor progress afterwards. Anyone who can sow a quick-growing variety, such as Golden Queen, on a north border will have good heads for early autumn supplies, but the land must be well enriched before sowing.—S. H. B.

Pea Dwarf Ne Plus Ultra.—Is this our old friend Omega, one of the late Mr. Laxton's very best flavoured Peas, that is posing in the eastern counties under the above title? Omega is 2½ feet in height, and except in its dwarfness has always been regarded as a reproduction of the old and favourite Ne Plus Ultra. But the other day I heard some eminent gardeners referring to Omega as a late variety in the highest terms. But we may also class Autocrat, probably the most popular late Pea in commerce, as a Ne Plus Ultra also, for the pods bear close resemblance to those of the old variety and have the same colour and sweetness. It is rather dwarfer than Ne Plus Ultra and generally a better cropper, but in the case of any of these high-flavoured, sugary Peas much depends on how grown. Deep soil, ample manure, plenty of room, frequent waterings, and mulching do wonders.—A. D.

The autumn Broccoli crop.—Those who had land at their disposal and were able to plant this crop early will reap the benefit, as I note in the southern part of the country there is a much poorer lot of plants than usual where these followed other crops, such as early Potatoes or other vegetables. Those who have to double crop the land, and they are many, will in such seasons as this have had a trying time, as the Potato crop was later than usual. This delayed planting, and with the great heat and drought plants since

that have made slow progress. I fear in the southern parts of the country there will be a poor supply of autumn Broccoli, as, though these plants have stood much better than the summer Cauliflowers, both are much alike and are affected by drought sooner than other vegetables. The plants on a firm soil are much healthier than on a loose one; indeed, in the latter they are poor and will not pay for labour. This shows the advantages of well working the soil in winter and planting when it has well settled down. The autumn Broccoli need a richer root-run than those which have to stand the winter.—S. H. B.

Dwarf Kidney Beans.—This has been one of the worst seasons probably ever known for these Beans. Literally everywhere they seem to have been of somewhat stunted growth and eaten up with spider. I made an effort to obtain in two diverse places trials of some twelve to fourteen varieties, but failure has resulted. Though not sown early, growth was remarkably slow, doubtless owing to the coldness of the soil and atmosphere. No matter what variety, all proved alike. Whilst the edible produce has been moderate, the seed crop should be a small one. I notice that Mr. Wythes speaks highly of the climbing Kidney Beans as showing so much more of robustness. That is due first to the fact that all these Beans are naturally climbers, and, being so, find natural help to grow in the support sticks furnish; and second, because the foliage is so much removed above the soil, it suffers less from radiated heat, and therefore less exposed to the attacks of spider. Even further, the foliage gets much more of light and air, and that, again, promotes robustness and health. Certainly a good row of staked Beans, if not sown thickly, once the plants have started climbing, get a good soaking and are well mulched with long manure, get help that cannot well be afforded to dwarf Beans. Almost always these latter are sown too thickly. For all ordinary outdoor varieties the seed should be 6 inches apart, and strong growers, like Canadian Wonder and Magnum Bonum, should be sown fully 9 inches apart. All the dwarfs are of very dense, branching habit, and sown thickly the plants soon crowd each other unduly. The climbing forms, whilst habitually sown more thinly, do not branch materially, but run up into the light and air; hence their greater cropping powers.—A. D.

WINTER AND SPRING SALADS.

THERE is always a brisk demand for salads in the spring, and to provide materials at that season we must sow now, and even then with our variable weather we cannot depend upon an open-air supply. As most growers are aware, Lettuce, the salad most in demand, is difficult to winter. Many growers have not glass at their disposal to winter plants, and if they have not it is useless to try to keep Lettuce of any size after November. For a winter supply it is by far the best plan to lift full-grown plants, keeping them as cool as possible and just free of frost. Those who have fruit cases will find these structures useful, as though thrown open for the fruit trees, there is just enough shelter to preserve the plants. For many years I planted in August a row of Lettuce between each row of late Celery and lifted these with a ball in October into a Peach case, placing the plants on the bed close together. They lasted for months treated thus; indeed, the plants grew freely after housing. Of course, cold frames will do for the plants for winter protection, but here damp is their great enemy. I prefer to place the larger plants in the house or case, putting the later sown or small plants into the frames. Treated thus, growth is more certain and there is less decay of leaves. These plants will give an early spring supply and follow on those lifted from the open ground in the autumn. Many who do not shelter under glass forward a crop early in the year by sowing in January in heat and growing on in frames, but the supply is much later than from autumn-sown plants, as, take the quickest variety I have grown, the Golden Queen,

it is the end of April or middle of May before the plants are large enough for use.

I now come to the open-air culture, and would advise this in every case. Now is the time to sow. It is essential to get as sturdy a plant as possible, and to do so I advise an open border, sowing thinly. I put out a goodly number of plants in front of fruit houses in October, the largest plants from the seed-beds being used. They are lifted with a dibber, and in planting made as firm as possible; indeed, the ground is trodden if at all light before planting (not dug). Here one may reckon on half the plants pulling through a reasonable winter, but those who have frames at command will do well to plant some out here, as they will have these to fall back upon in case of severe weather. Often the smaller plants in the seed-beds are not much injured when those planted out are killed. For earliest supplies the Cabbage varieties are the first to turn in, and for autumn sowing, Lee's Immense, Hammersmith, Hardy Green, and Brown Dutch are the hardiest kinds, and in the Cos section the Bath or Brown Cos, Brown Sugarloaf, and Hicks' Hardy White are among the best. For some years I have grown a small, compact Cos variety called Intermediate, a cross between the Cos and Cabbage, and a remarkably nice variety for winter work or frame culture, owing to its size and hardiness. In winter there is no lack of Endives. The Batavian Round-leaved is the best for winter work. Endive well repays frame or house protection treated as advised for Lettuces, though I have wintered medium-sized plants of this variety under walls. Endives, like Lettuce, force well early in the year under glass, the Green Curled being the best for this purpose. I have also grown Endive in pots and got a fair return, but there is less demand than for good Lettuces. Many could have tender Watercress by sowing seed in winter and growing on, finally planting out in the shade and giving ample moisture.

G. WYTHES.

Vegetable Marrows.—Although useful as a variety, I can never understand why Vegetable Marrows are made so much of, especially at small local shows. Every exhibitor who has the least convenience must grow and show a pair, and no class is watched more keenly. With shows that occur in July it is a good deal of trouble for a cottager who has no frame to produce them, and yet their value as a food product is very slight. There is something very interesting in growing them, and this, I suppose, must account for their popularity among the class referred to. It is a pity that they do not go in for a nice shapely, small Marrow instead of immature specimens of large kinds.—H.

Potato Renown.—"Norwich" writes very favourably of a Potato under the name of Renown. Will he say whose Renown, as there are two in commerce? One was put into commerce some twelve years since from Bedford, and the second one by Messrs. Webb and Sons. Both are main-crop varieties, both rounds, and, so far as my experience of them has gone, both excellent. Dean's Renown was raised by crossing Magnum Bonum with pollen from the handsome and excellent Woodstock Kidney—of all varieties known for the past twenty-five years, probably the best to furnish pollen. "Norwich" seems to have been more favoured for rain than we have been in the south. Generally Potato breadths are very thin and weak, the tuber prospects being indifferent.—A. D.

A Pea insecticide.—At a recent meeting of the fruit and vegetable committee Mr. J. Crook, of Forde Abbey Gardens, Chard, sent up a few plants of tall Peas in two small bundles to show the effects of an insecticide known to him as spine in the destruction of thrips. These insects have been destructive to Peas this year beyond all precedent, and anything that would help to check the depredations of these pests would be heartily welcomed. The plants in both cases showed that for 2½ feet in height and before the

spraying took place the foliage was quite eaten brown, but for 3 feet above the leafage was very fresh and green, slight evidence of the solution on the foliage only being visible. I know nothing of this insecticide beyond Mr. Crook's statement, and do not know who is interested in it. But I should like to see it tested at Chiswick another year, for there Peas generally suffer very much from thrips, because the atmosphere is so heated.—A. D.

SMALL EARLY SPRING CABBAGE.

To have an ample supply of good Cabbage in March and April one must now sow for that purpose. The chief drawback with the very early plants is that some kinds bolt so badly if sown too soon. Again, sowing at this season is greatly influenced by the weather, as delay in planting will mean later cutting. Of course, at the early season named a large Cabbage is not needed in private gardens, and any variety that will closely follow the winter kinds such as St. John's Day is of great value. To obtain an early Cabbage, a few years ago I crossed a good type of Rosette Colewort with a spring variety and with good results, as though the produce is small, it is of excellent quality, very hardy, and does not run to seed. This may be sown at the end of June and will turn in the end of March, or sown a month later, is earlier than the ordinary spring kinds.

Sutton's April is one of the best I have grown for earliest cutting. This sown even in August will be earlier than some kinds sown in July. Few kinds have a more compact growth than the April, and it is well named, as all the plants raised the last week in July may be cleared in April and Ellam's follow on, so that there is no break in the supply. In a severe winter the growth of the April is rapid. I plant it rather close—15 inches apart always. This allows of many plants being placed on a small space, and it is wonderful how reliable this variety is, as scarcely one in a hundred runs. I have grown Little Gem, also Little Pixie; both are good, but of the three I prefer the April, as it turns in so true to time. Little Pixie is a little later, but of equal quality. Little Gem is more useful sown for autumn supplies. There are other kinds doubtless well worth a trial, but I have selected those named on account of their reliable qualities.

G. W. S.

Feeding Asparagus.—There is a great demand upon the manurial constituents in an Asparagus bed now that the stems are getting large and tall. This may be met by occasional soakings of liquid manure or by sprinkling at the rate of 2 ozs. to the square yard superphosphate and salt. I used this manure two years ago and again last year, and it seems to suit the Asparagus well; indeed, there are few crops it does not suit. The better the stems of the Asparagus are nourished the finer the produce will be next season, and where growing in a very exposed place or in any position where the stems are likely to fall about, these should be supported in some way. A few Pea stakes thrust into the bed at the time cutting is relinquished for the season is a good protection, and a stout stake at intervals of 6 feet, with a line of tar string all round, is an additional support. Seed-bearing is weakening, and if time can be spared a little of this should be removed by taking the side branches off with a knife. Anything in short that can be done now to ease the plants and enrich the beds where they are growing will be well repaid by the increased size and earliness of the crop next season. Many growers mulch and feed liberally early in the summer, but now is the time to do so.—GROWER.

Runner Beans.—I have some fifteen varieties of runner Beans on trial this season, and so far the best seem to be Lightning, The Czar, Mammoth Scarlet, and Best of All, and if either of the two latter were selected to grow with the two first-named, three finer runners could hardly be desired. Lightning is a stringless-podded variety almost round in shape and very fleshy.

As its name implies, it does its work very quickly and is one of the first to come in. It also possesses the merit—no slight one by the way—of setting well in dry weather. The Czar is a white-flowered variety of excellent constitution, very even in shape, and a large, handsome Bean. Mammoth Scarlet is, I think, the best scarlet-flowered variety on trial. All three are good croppers, but the fact of Lightning setting so freely puts it absolutely at the top from this standpoint. The season during the past fortnight has been very trying for runner Beans, especially on light, dry soil. The advantage under such conditions of sowing in trenches and giving a heavy mulching of manure is very apparent. This, however, in an exceptionally dry time is hardly enough to keep the plants going satisfactorily, and I have been compelled to resort to the water-barrel and the liquid manure tank.—E. BURRELL.

Late Peas.—Late Pea crops are very precarious, owing to the variable character of our autumns. Good, tender, sweetly-flavoured Peas in October are so highly appreciated in the dining-room, that any extra trouble to secure such is well repaid. These late rows are often neglected, and where tall sticks are not forthcoming, the haulm is allowed to fall about. Such vigorous growing varieties as Ne Plus Ultra and British Queen will in dry seasons soon drain the soil of all moisture, mildew making its appearance. Where ordinary height stakes only are in use and the haulm has grown above them, I would advise cutting it off at that point rather than allow it to fall down and thus smother the younger pods and blossom. By all means mulch liberally and give a good root drenching once a fortnight with farmyard liquid, and should mildew gain a footing, use some well-tried exterminator. Anyone possessing a few good fruitful rows of late Peas will do well to use means to prevent mildew making its appearance at all. To three pounds of unslaked lime and four pounds of sulphur add one gallon of water and boil all together for forty minutes. When settled pour off the clear liquid and bottle. Use in the proportion of half a pint to three gallons of soft water. If owing to the stakes having been placed too far apart the haulm is falling through, place some stout rods horizontally along the rows on both sides, securing them to one another here and there with stout twine.—J. C.

Hearting Lettuces.—The passing season has been a very trying one for all descriptions of Lettuces. Not only did the heat and drought seem to favour early bolting, but there seem to be many stocks of Lettuces in commerce that need very little help in that direction, for they bolt off even under favourable conditions. It is evident that in the matter of stocks there is much divergence, and it would be a good plan could we have a thorough test made of all varieties in commerce as to their hearting and standing properties. Some years ago there was in commerce a stock of the Paris White Cos named Alexandra that stood long after hearting before it bolted off to seed. I wonder whether that stock is now existent. There was one grown at Chiswick during the present season under some other appellation that closely resembled the Alexandra. Whilst judging gardens in the Witley district of Surrey I came upon a remarkably fine stock of a Giant Green Cos, not the Giant White or Mammoth Cos, that hearted in finely. I have nowhere this season seen a better one of this type of Lettuce. Generally the Giant White Cos forms, although very noble looking, yet failed to heart in under the influence of the drought. Cabbage Lettuces generally have been more satisfactory than Cos Lettuces, but in many cases I found the stocks of these to have bolted early. Of course, cottagers cannot give their plants the same high culture and ample watering that gardeners do, but all the same I think few crops just now are scarcer in gardens than are good Lettuces. It is very unfortunate that in hot, dry weather when salading, and Lettuces especially, are most needed these best of all summer salads should be so difficult to obtain good.—A. D.

SOME RECENT FLOWER CREATIONS IN CALIFORNIA.

MORE than forty years ago a few nurserymen and gardeners in California began experiments in seed-raising, and propagated accidental seed-

yellow species. For several years past Mrs. Shepherd's Cosmos beds have shown more decided breaks towards new shades and forms. She has a strain of dwarf and very early Cosmos; another of giant and larger-flowered ones. The yellow Cosmos exhibits similar



New seedling Cosmos from Mrs. Shepherd's garden at Ventura, California.
From a photograph sent by Mr. C. H. Shinn.

lings of merit. Some new Roses were brought out as early as 1860, I remember, and several growers produced excellent seedling Geraniums, Verbenas and Petunias, which were shown at state and county fairs. This summer I visited the noted Morse seed farms near Gilroy, where I saw many acres of Sweet Peas and other flowers. This company has brought out a long list of charming novelties. Such seed-growers as the Morses, of Santa Clara and Gilroy, such hybridisers as Luther Burbank, of Santa Rosa, such nurserymen as John Rock, of Niles, and such collectors as Carl Purdy, of Ukiah, have made places for themselves high on the list of our horticultural leaders. It is an interesting fact that those who know most about California give Mrs. Theodosia B. Shepherd, of Ventura, who began this work in 1873, a very high place among the raisers of new flowers. Her recent creations appear in many American and foreign catalogues, and her small but beautiful town garden on the cliffs of Ventura, hardly a bow-shot from the ocean, is yearly visited by many pilgrims. I have seen it at several seasons, and it is a marvellously crowded workshop. Mrs. Shepherd's local reputation as a florist became national mainly through her success with the Cosmos. The illustration shows some of her new seedlings of lacinated varieties and different colours. The dark ones at the left are of the small

variations, and especially fine are the newer and brighter shades of crimson. Her best success comes in many cases from self-sown seeds. In fact, Cosmos is as well adapted as the Godetia to naturalisation here, as the spring rains are enough to bring self-sown plants to flowering. Self-sown Cosmos often sprout by September 15, and of course in the mild Ventura climate grow all winter, beginning to bloom by April, when spring-sown plants must be watered almost constantly. I should think that in the Channel Islands the Cosmos could easily be naturalised. At the little flower garden of the Santa Monica forestry station, on the Southern California coast, not only Cosmos, but Coreopsis, French Marigolds, and a number of other composites, as well as Eschscholtzias and Salpiglossis, reproduce themselves freely from self-sown seed.

With proper thinning, such flower beds maintain a brilliant display. One summer, while in Mrs. Shepherd's garden, she showed me a Cactus fruit of great beauty and superb quality. This very attractive novelty (shown in the illustration) ought to find a place in the fruit markets of the world. It was as large as a Peach, dark red in colour, and possessed a higher flavour than any other Cactus fruit with which I am acquainted. The parent plant is the well-known *Cereus colubrinus*. Blossoms of this were hand-pollinated with the scarlet-flowered *Phyllocactus Akermanni*. Seedlings are being grown, and much is expected of this hybrid, though none have yet bloomed. Although this Cactus fruit is covered with spines, it breaks open when ripe, and is much easier to manage than the fruits of the *Opuntias*.

It would be difficult, if not impossible, to give a complete list of Mrs. Shepherd's introductions. One of her earliest successes was with Cannas, and her Canna hybrids continue to appear. She has sent out Carnations, Poppies, Dahlias, Roses, Chrysanthemums, and, in fact, good varieties of all the garden flowers. Her well-established reputation as a hybridiser rests in great measure, however, on a set of superb fibrous-rooted Begonias, which seem to possess a very high value for the flower garden in some districts. I have seen many of these, and have grown several of the best. Nothing else in the Begonia line out here is so stately and permanent. Mrs. Shepherd writes to me from Ventura, under date of August 6, 1899, saying of her new strain of Begonias:—

They are almost trees, with grand brilliant leaves and immense clusters of flowers, tropical in their splendour. A new one, Marjorie Daw, is a very rapid growing climbing variety; parents, *Begonia rubra* × *B. glaucophylla scandens*. The latter is a much more delicate and creeping variety, yet its influence is seen strongly in the offspring. . . . Marjorie Daw is like *rubra* in cane-like growth, size and shape of leaf, in the long stems and size of the flowers; it is like *glaucophylla scandens* in its climbing habit, the red circle at the joints of stems, and partly in the shape of the leaf. The flowers of *B. rubra* are red and those of *B. glaucophylla scandens* are salmon-pink. Marjorie Daw has very large flowers, in spreading panicles; in colour a sea-shell pink with white spot on the ovary. The flowers are much larger than those of either parent. It grows rapidly, throwing out vigorous shoots that in five or six months reach a height of



Hybrid fruit of *Cereus colubrinus* × *Phyllocactus Akermanni*.

6 feet. It branches freely, blooms profusely, and would, I believe, reach a height of 20 feet.

A good deal of interest is now being shown in the bulb industry, and California growers hope

ultimately to supply most of the American trade with Daffodils, Hyacinths, Tulips, &c.

CHARLES H. SHINN.

ORCHARD AND FRUIT GARDEN.

LATE STRAWBERRIES.

WHAT has become of our late Strawberries? Why are they not found in the market? To have them early seems to be the only aim of growers, and all the varieties come in with a rush for a week or two and are gone again. I was in a large provincial town lately when it was glutted with this fruit, and about eight days afterwards there was none. In good private gardens there are occasionally a few late varieties grown, but no crop to speak of, yet there need be no more difficulty in having late crops than early ones, and I have no doubt but that good dessert Strawberries in August and September, or even as late as October, would pay as well if not better than early ones. I noticed this season in one of the most reliable Covent Garden Market lists that on June 22 Strawberries per dozen punnets were priced at from 2s. to 5s., and at a proportionate figure by the peck from Kent and Middlesex. By July 15, when the season was approaching its end, the price had risen to 8s. per dozen punnets common sorts, and British Queen to 15s. By July 29 the price for ordinary kinds had risen to from 10s. to 15s. per dozen, and by August 5 Strawberries had disappeared from the market. And this in London! In Paris the supply will be going on till September at least with alpinas, of which more further on. In Scotland the supply goes on later, and late districts in England have late crops, but, whether north or south, the crop may be prolonged much beyond the usual time by culture and the use of the right kinds. Many years ago I remember a plentiful supply of Strawberries being kept up in a large garden in Scotland all through August and into September with late dessert varieties, and after that the supply was prolonged by alpinas on a north border. Strawberries were not wanted sooner, because the owner of the garden with his establishment did not arrive at his seat till the middle of August and left again in October, and the gardener had to meet the demand as well as he could. This he did by planting good breadths of British Queen Strawberry, Bicton Pine, and in greater quantity Elton Pine. Frogmore Late Pine is said to be an improvement on the latter, which is, however, probably yet the best late Strawberry grown. It is a good grower, a prolific bearer, of large size, and good brisk flavour. In the garden I speak of it used to be planted between the rows of the latest kinds of dessert Gooseberries, giving both plenty of room, and the same net covered both crops. To give an idea of the length of the Strawberry season, I may mention that in that garden the Black Prince variety, the best early kind yet produced, came in about the middle of June or beginning of July, succeeded by Keens' Seedling, still one of the very best and most dependable. After these came British Queen, and last of all the Pines, extending the season into September, for it is a feature of the Elton Pine that the fruit ripens long in succession. Since then a generation of gardeners has grown up who appear to know not that there are such things as late Strawberries, and who waste much precious time in running after the new and often useless sorts as fast as they come out. The other day a great Strawberry grower and raiser sent me his

catalogue containing a list of some fifty varieties, including about a dozen new ones. I sent for sample runners of the Elton Pine, and out of all his acres and varieties he could not supply me. One called Latest of All, a reputed cross between Helena Gloede and British Queen, does not deserve its name, and it can neither compete with British Queen for flavour nor with Elton Pine for lateness. It is much the best plan to discount all these much-praised new Strawberries at least 50 per cent. Gardeners will not soon forget the sort called Noble that came out with such a flourish backed by the experts of the Royal Horticultural Society, only to be banished out of every good garden as soon as tested and tried. Now is a good time to plant runners of the Elton Pine or indeed any variety. British Queen I do not recommend as a variety to be relied upon to grow well, otherwise wherever it does grow it will also bear well, and for size and flavour it is still unsurpassed either for forcing or planting out. It likes a rather light, rich soil and a warm situation, but the finest crops I ever saw were grown in the Lothians in the open quarter, but under high culture. It is very subject to red spider, which destroys the foliage, and hence it cannot endure a poor, dry soil. It is, however, well worth good culture, and the fruit would find a ready sale.

PREPARING THE GROUND.—The best plan is to trench the soil two spits deep at least, as the Strawberry will send its roots 3 feet into the soil if they can get down, and in a dry season like the present it will set the drought at defiance because the roots are deep and within the reach of moisture; in fact, this treatment suits all varieties. High culture of the Strawberry, it is known, will nearly double the weight of the crop owing to the greater size of the berries. Early mulching is also almost indispensable in dry soils, and for that purpose there is nothing better than short litter or short grass from the lawn-mower, provided plenty is used. I have often seen a well mulched quarter of Strawberries produce a fine crop in a dry season when they were a failure throughout the neighbourhood. Any manure applied in preparing the ground should not be trenched in deep. It is lost when so applied because the roots are long in reaching it, if ever, and heavy rains carry its virtues away into the subsoil and drains. The ground should first be trenched, and then if farmyard manure is applied it should be dug or forked in afterwards in the surface spit, and after that artificial manures may be applied to the surface in early spring. The constituents of the fruit of the Strawberry consist, according to the best analysis, of over 20 per cent. of potash and soda and a large percentage of lime, phosphoric acid, silica, and peroxide of iron. The three first named are of most consequence, and where they exist the others will generally be present. The lime should be thoroughly incorporated with the soil, and potash may be supplied in the form of kainit as a surface dressing. Manures that suit the Potato suit the Strawberry also, and a plantation of Strawberries may follow a crop of early Potatoes, which are usually off the ground in time for Strawberry planting. The kainit has, like salt, also the merit of attracting moisture from the air. With farmyard manure, succeeded by kainit as a top-dressing, I have seen some remarkable results on Potato crops. Some six rows of Potatoes were dressed with kainit in the middle of a field of 12 acres, all the conditions being equal, and these rows could easily be distinguished from the highway a good distance off by their superior growth, and when lifted the crop was

nearly one-third heavier than that of the rest of the field.

DISTANCE APART.—One important matter in Strawberry culture in both late and early crops is to give the rows plenty of room. Where the foliage of the rows meets during the summer the fruit is shaded, longer in ripening, never so good flavoured, and in wet weather great quantities of fruit rot, being soft. Thick planting also encourages slugs and black beetles (clocks), which hide under the foliage and destroy much fruit. I have seen immense quantities of the finest fruit destroyed by these pests in some gardens. They are the one objection indeed to the mulching of Strawberries, and they are always least troublesome in plantations where the rows are wide apart and where the plants have room all round. Varieties like the Black Prince, which has scanty foliage, may be in rows 18 inches apart, but with all other sorts the rows should be at least 2 feet 6 inches apart, and 3 feet is not too wide for some sorts. The plants develop fine crowns and foliage under such circumstances and the fruit gets the sun, but the rows should run north to south. In making plantations about this season the plants may be put 9 inches apart in the row if they are expected to fruit the following summer, as they should do, but at the end of the first season every other plant should be removed and 18 inches allowed from plant to plant. It is a sheer loss to have the plants thinned the first year, as half a crop may be lost thereby. I cannot too much impress upon cultivators the importance of securing a crop the first year. It is seldom one sees that in gardens, but it is just as easy to have the crop as not. Layer the Strawberry runners in July on a ridge of good soil laid between the rows, stop the runners beyond the layer as fast as they push, and plant out as early as possible in August and not later than September. At all times keep the runners chopped off close in to the stools when they are not required for fresh plantations.

ALPINE STRAWBERRIES.—These fruit during August, September and October in this country, according to the climate. In Paris they are plentiful in August, heaps of fruit being shown in the market. The largest fruits are about the size of a lady's thimble and the flavour is agreeable and refreshing. The late Mr. James McIntosh, gardener to the Duke of Buccleuch at Drumlanrig Castle, was the only one I have known who grew alpinas extensively and successfully. The seed was sown about midsummer and the plants were planted out in August on a north border, but they will do equally well or better on an east or west border in cool localities. Care should be taken to get good new seed, which should be sown on a fine surface of light, nice soil and not covered too deeply. Regular watering is necessary till the plants are fairly up, and when they have made two or three leaves they should be planted out in rows about 1 foot apart. After culture consists in keeping the runners pinched off as fast as they appear so as to secure good crowns on the plants, which will produce abundantly the following autumn. Seed may also be sown in spring in frames, and if the plants are put out in good time they will be strong by autumn, but will not fruit till the following year. Summer-sown and autumn-planted plants are best. At Drumlanrig, at the time I refer to, late and alpine Strawberries, late Gooseberries and late Raspberries used to be regularly supplied to the house for dessert. J. S. W.

Plum Pershore.—Some time ago a little friendly correspondence passed between Mr.

Crook, of Forde Abbey, and myself as to the merits and cropping powers of the above Plum. Just lately I saw and tasted a fine-looking sample in a fruiterer's shop in Norwich. The flavour, though by no means comparable to that of some other sorts, was decidedly better than that of the fruit I used to gather from a warm wall in South Notts. I was informed the consignment came from Devonshire, and there is no doubt that soil and situation make as much difference in the flavour of Plums as of any hardy fruit. Some time ago in a note on Plums in *THE GARDEN* a Kentish grower criticised the flavour of Pershore, but having to-day eaten some in a stewed state, I am bound to pronounce them excellent.—B. S. N.

Grape Gros Colman.—There is no doubt this fine Grape requires a long season to finish and colour properly, and it must be kept going all the time—that is to say, it is no use to grow it in an early house with other quicker developing kinds, and when the latter are ripe to throw the house open under the impression that any kind of treatment is good enough for Gros Colman when once colouring begins. No Grape is more liable to go foxy under such conditions and none is more trouble to get out of this state. The large berries require a lot of filling out, and to do the variety well it should be grown by itself, or else in company with a hard-skinned Grape like Alicante that is not averse to a long season. Such a house started early, say in February or earlier, will, I believe, produce Gros Colman in the finest possible condition, and it need not be a large house either. Some of the nicest looking and best quality Gros Colman I have seen were grown at Norman Court, in Hampshire, some years ago in a small house with almost upright lights of the Peach case order—not exactly the class of structure one would expect to be suitable. The Vines were liberally treated, had plenty of room laterally, and were grown all the season.—H.

RED SPIDER ON PEACH TREES.

THE remarks by "J. C. B." (p. 114) on the above subject are well worth perusing by those having Peach trees under their charge. "J. C. B." is quite correct in his idea that red spider commences its destructive operations at a much earlier period than many are aware of. In fact, I have seen numbers of the insidious pest on trees in full bloom under glass, that is when the trees had received no winter dressing. On taking charge of a fresh garden I once had such a colony to deal with, but of course nothing could be done till the fruit was set. By that time many of the tiny leaves had quite a brown appearance, and I never thoroughly conquered it that season. Doubtless after mild winters spider often exists on open-air trees, as frequently these do not receive any insecticide during the resting period. But why should wall trees be neglected in this matter any more than those under glass? Then with the former many are afraid to apply the hose or garden engine so early in the season for fear of frost occurring at night while the foliage is wet, or lest the application should cause an attack of mildew, and so the remedy prove as bad as the disease. There is no need whatever at that early date to postpone syringing the trees until the after part of the day, as is the case later on in the season. If even in April a fine sunny morning is chosen and chilled water used, syringing may be quite safely practised immediately after breakfast, as scorching need not be feared and the foliage dries before nightfall. "J. C. B." informs us that his friend at Lake House, Byfleet, uses a mixture of soft soap and sulphur and finds it effectual. I have used quassia extract with very good results, following this with a good washing with clear water the following morning. If trees are in fairly good health and these preventives are proceeded with in time, and continued through the months of May and June at intervals of say ten days, the trees being also well mulched and watered, good crops are rendered pretty certain—at least in

average seasons—and the health and longevity of open-air Peach trees ensured. NORFOLK.

RIPE GOOSEBERRIES.

REALLY good, thoroughly ripe Gooseberries are rarely to be bought, and the owners of the majority of gardens, large or small, are not often favoured with a supply. This is not quite as it should be, as it is certain no hardy fruit is more wholesome or more pleasing to the palate. Immense quantities of Gooseberries are grown in all directions, but the bulk are picked in a green state, and what are left to ripen are eaten by birds and wasps or they crack prematurely. A dry, hot summer suits Gooseberries left on the bushes to ripen, and I never tasted better fruit than were available in all too small

months. Bullfinches were never more plentiful or destructive among fruit buds generally than they were this year, and in many gardens fruit bushes and trees were nearly cleared of fruit buds.

The framework of Gooseberry houses should be moderately strong, as they will occasionally have to bear a great weight of snow. If one rafter has a flaw in it and breaks, the whole of the structure will most probably collapse. It is also of importance that small or three-quarter-inch mesh wire netting be employed, especially along the fronts and sides, small birds finding their way through larger openings. According to my experience, the netting and woodwork offer a certain amount of protection against frosts, and I have seen Gooseberry crops outside badly injured while those under the netting escaped.

There is no necessity to confine these permanent structures wholly to bush fruits. If formed against a wall lean-to fashion, the back wall may with advantage be covered with either Cherries or Plums, with cordon Gooseberries and Currants between them as long as there is room for these. If the house is built quite in the open, the sides should be sufficiently high to admit of all the uprights and supports generally being clothed with cordon Cherries or Plums, while among the low bushes may be dotted standard Gooseberries and Currants. The one drawback to this plan of permanently covering Gooseberry bushes is their liability in some cases to be more over-run by the Gooseberry caterpillar than are those unprotected. This, however, is not a particularly strong argument against the plan I am advocating. The cuckoo is the only bird I ever saw feeding on the obnoxious caterpillars, but it is just possible certain kinds of small birds may eat more of the egg-depositing flies than we give them credit for doing. These small birds can be admitted from the time the buds are too forward till the fruit is ripening by simply providing large netting-covered shutters for the sides and ends, taking these away till they are wanted for excluding the blackbirds. There is also the other alternative of moving and burn-



Gooseberry Green Champagne.

quantities this season. Unfortunately, birds, notably blackbirds, made a dead set at ripe and ripening Gooseberries, and netting over in the ordinary manner proved of little avail against them. Bushes were cleared wholesale in a single day. Years ago I advocated the more general adoption of the plan of growing Gooseberries under light wooden or iron structures permanently covered with galvanised wire netting, and those who acted upon this advice have this season had good cause to be particularly pleased at their decision. It should be remembered that these Gooseberry houses if properly constructed not only save the fruit, but, what is even of more consequence, they preserve the buds from bullfinches and other small birds during the winter and spring

ing the surface soil down to the roots every winter, and with this taking away and destroying the greater portion, if not all the cocoons or fly cases. The surface soil being replaced by moderately rich compost, the double purpose of preventing a bad attack of caterpillar and of feeding the roots has been answered. Other remedies, such as mulching with tanner's bark, surfacing the ground with gas-lime, spraying the branches with quassia or hellebore extracts, and dusting with hellebore powder, are all open to the cultivator to adopt, and in any case it is better to run risks from caterpillars than from birds.

Judges at flower shows will agree with me that as a rule really good Gooseberries are seldom met with on the exhibition table, but it

does not follow that the smaller-fruited varieties are invariably the best. The best I have tasted is, without exception, *Whinham's Industry*. We have been apt to value this variety principally for its reliability as an early variety, gathering the whole or greater portion of the crop in a green state. For the future let me advise those who appreciate good ripe Gooseberries to leave a sprinkling of fruit on all the bushes rather than a heavy crop on a few bushes—a mistake often made with other varieties, with the result that the fruits are undersized, liable to drop prematurely, and poor in quality. *Keepsake*, another variety recommended for its heavy cropping and the quick growth of young fruit, is also of excellent quality when ripe. *Whitesmith*, also a popular market-grower's variety, has always been regarded by me as one of the best for dessert, and if properly thinned out the fruit attains a comparatively large size. The same remarks apply to *Crown Bob* and *Lancashire Lad*. Only give a portion of the fruit a chance to ripen properly, and the results are bound to be satisfactory. *Snowdrop* and *Antagonist* are both fine white varieties of excellent quality when ripe, and I can also strongly recommend the greenish yellow *Leader*. It will thus be seen that it is possible to grow Gooseberries for profit and yet have some left for eating in a ripe state, the quality of which cannot be surpassed by many of the smaller-fruited varieties of reputed superior flavour.

We ought not, however, to wholly dispense with the smaller varieties, as we are not all market-growers, and there are some seasons when the larger-fruited varieties ripen indifferently well, and also keep badly. Early *Sulphur* is a remarkably heavy cropping variety, ripening early, while the quality is passable. All the *Champagnes*—red, white or green and yellow—are good bearers, and the fruit, though small, is of excellent quality when ripe. By some authorities these are regarded as among the very best flavoured Gooseberries we have. *Keens' Seedling*, a medium-sized early form of *Red Warrington*, is very reliable and good, and I must confess to a liking for the small-fruited *Rough Red*. *Pitmaston Green Gage*, another variety with small fruit, is also of excellent quality. The most valuable of all, whether compared with large, medium-sized or small varieties, is the *Red Warrington*. No other sort hangs so long on the bushes, the quality being good till quite late in the season. I have seen bushes red with fruit in September and October, and, where a long succession of Gooseberries is required, at least half the bushes under a netted-in structure should be of this variety.

W. IGGLDEN.

The woolly aphis.—I gather from Mr. Hay's observations respecting the woolly aphis in New Zealand that there the pest most seriously operates on the roots of the Apple trees. That is probably due to the great dryness of the atmosphere there. One naturally wonders how the aphis would fare could the roots now and then be deluged with water, especially strong soot water. But so far as my experience of the aphis is concerned here, it attacks roots but little, and tree stems and branches much. That being so, it is difficult to understand what benefit would result to the trees from the employment of Northern Spy Apple as a stock, as it is most improbable that any deterring properties possessed by the stock would equally operate on the tree upon it. But one wonders why, with ordinary care, the woolly aphis should become an appreciable trouble here. Anyone having trees suffering from it has but to spray them once or twice during the season with some powerful insecticide and the trees will be

cleared. But the other day, having been invited to test the merits of a solution called *Abol*, I took it to a large Surrey garden where there are hundreds of Apple trees, but found woolly aphis on one only, a very aged *Blenheim Pippin*. With the aid of a special spraying syringe I gave all the spots of aphis I could see a taste of the liquid, and it settled them rapidly enough. It is but needful to follow up sprayings of this nature two or three times and the pest is easily kept in check. But, after all, it gives little trouble in this country, except where it is left untouched. The past two or three dry seasons have helped the insect very much, but damper summers will check it greatly, as they will many other insect pests.—A. D.

SUMMER PRUNING FRUIT TREES.

I WOULD be much obliged if you could let me know how to do the summer pruning of Apples, &c. All the books I have, tell you to summer prune, but do not say how or when.—R. W. M.

* * Early in the summer, or before the shoots are many inches long, all wall trees ought to be gone over, and wherever lateral growths or shoots from old spurs are numerous these ought to be freely thinned out. The same with much-pruned or somewhat dense, bush, pyramid, cordon, and espalier-trained trees, the effect of this being to strengthen and otherwise benefit the reserved growth. Summer pruning proper may commence while yet the topping can be done with the finger and thumb, doing this from the middle to the end of June—not earlier. Very hard topping must not be resorted to, as this when done by too zealous pruners results in starting the basal buds into active growth, the shoots formed being soft and of the wrong character: whereas summer pruning is intended to strengthen the basal buds, some of these ultimately developing into either fruit-buds or short fruiting spurs. The young growths may be topped beyond the fifth leaf on each shoot, and if the tree is vigorous, shoots will be pushed from the fourth and fifth joint in every case. These second breaks should also be topped beyond the first leaf, treating later breaks similarly. At the winter, or, better still, late autumn, pruning all these topped laterals must be shortened just beyond the third bud from the base or below where they broke after topping, leaving a short spur from which one, or at the most two shoots will spring the following summer, fruit-buds developing from the rest. If this treatment is persevered with, all the main branches of Apple, Apricot, Cherry, Pear, and Plum trees will gradually become furnished with abundance of fruiting spurs which are sufficiently short to derive the full benefit of the heat and protection from the walls or fences to which any of them may be trained. This form of summer pruning tends to correct grossness in trees, as when long and strong shoots are allowed to develop, only to be hard pruned in the winter, the principal result is often a greatly increased quantity of sappy wood only.

The older and more common form of summer-pruning consists merely in cutting back all the shoots not required for furnishing after they have developed to their full size and become hardened. Not unfrequently this is all the pruning the trees receive, and it is only done when those responsible think it is about time to admit more light to the fruit and to otherwise benefit this. Allowing the trees to grow thus wild through the greater part of the season means so much wasted vigour, and is not conducive to productiveness. The least that can be done is to prune all the laterals directly the wood has become somewhat firm, or, say, not later than the third week in July, shortening them to the fifth leaf, completing the pruning—shortening to the second or third bud from the base—either before the second leaves fall or soon after. This treatment has the effect of benefiting the current crop of fruit and also of strengthening and developing the basal buds, some of which may become fruit-buds during the following summer, fruit-buds in most cases not forming in a single season.

Some cultivators also summer-prune the growths intended to be laid in or reserved as leaders, topping them when about 12 inches in length, but I prefer reserving and laying the strongest in to their full length, winter-pruning only those that require strengthening. What thinning out of shoots may be rightly thought necessary in the case of dense bushes and pyramids is best done in the summer, or while yet the leafage is fresh. Not only can the operator then better decide which ought to be removed, but the timely thinning admits sun and air to the interior of the trees, benefiting what fruit may there be swelling and also tending to develop more fruit-buds. Too often these classes of trees fruit on the surface only. The leading growths on trees that must be kept restricted in size may be topped at a length of 10 inches to 12 inches, and shortened somewhat severely at the winter pruning, but those on more naturally grown trees ought to be more naturally treated, that is to say, should be left intact both now and next winter. Without the aid of diagrams I fail to see how I can more plainly describe summer pruning for the benefit of "R. W. M." and other readers requiring information on the subject.—W. I.

GRAPE FOSTER'S SEEDLING.

FOR flavour this Grape cannot of course compete with such fine kinds as *Muscat of Alexandria* or *Mrs. Pearson*, but there are many growers who have not heat enough for these varieties and are glad to fall back upon a white kind of medium quality easy to grow. In *Foster's Seedling* we have a useful all-round kind that is as easily grown as *Black Hamburgh*, easier to keep in good condition, and though not in the first flight for flavour, yet good enough to find a place in the best collection of dessert fruit. No Vine that I know will bring a heavier crop to perfection, and the only fault of the fruit is a little muddiness in colour, which, however, is not confined to this only. If good-shaped, well-shouldered bunches are looked for, the wood must be fairly strong and well ripened, and the Vine should not be pruned too long. Large bunches may be produced by leaving several eyes and pruning to a very prominent one, but they are seldom of first-rate shape, and the beauty of a good bunch of *Foster's Seedling* lies not so much in its size as in the good shape, and well filled up shoulders are a great help in this direction. *Foster's Seedling* is a rather thin-skinned variety, and on this account should not be grown for keeping late in the season or when it is difficult to keep up a correct atmosphere in the vinery. It is very apt to split if kept either in too moist an atmosphere or a very dry one and watered at the roots, and though far from advocating a system of drying off the roots of any variety, it is a great mistake to let those of *Foster's Seedling* have a lot of moisture when the fruit is ripe. Provided the atmosphere of the house is kept at a nice equable state as regards moisture up till the time the berries are colouring, there will not be much fear of the latter going. It is when moisture is pressed in every day and the heat kept up until colouring commences, and then the dry air allowed to play about the bunches suddenly, that wholesale cracking takes place, and then it is difficult to cut even a fairly good bunch. The plan of tying the leaves back from white varieties has been often recommended, but it is only in exceptional cases that any need for it exists. All white varieties like ample light, and this should be kept in mind during the growing season and the laterals kept thin. The principal leaves then need not be interfered with, but allowed to carry out their proper functions undisturbed.

H.

Peach Sea Eagle.—Though usually looked upon as of second-rate quality, this fine Peach is not really so when well grown and ripened. Its fine form and handsome appearance are very well known, and there was a large number of good dishes of it at the recent show at Shrewsbury, notably in the classes for dressed tables. There

are few Peaches that will carry so heavy a crop to perfection as this, and I was reminded of this at Shipley, where a tree was carrying a very heavy crop, though the individual fruits were large and the tree grown on a cross trellis, not the most suitable place for ripening up late Peaches. It is, according to my experience, far before Princess of Wales, and a very useful kind where late fruit is needed.—H.

Plum Victoria.—This deserves its popularity as a good standard kind, useful for dessert or cooking, and one of the most constant bearers in cultivation. The fruit is above medium size, and when properly ripened the flavour is superior to that of many kinds that are thought far more of. In most years the fruit has to be thinned considerably, but there is none of that to do this year as far as this garden is concerned. Still it is the only kind that has a crop at all, and it rarely fails entirely. Most of my trees of it were shifted last autumn, and the season has been rather against them of late, but the trees have made a fine healthy growth in spite of this. This Plum needs a good amount of feeding owing to the immense crops of fruit it annually produces, but it is a mistake to plant it or any other kind on well manured, loose soil. It should contain the proper elements for supporting the trees, of course, but the roots should be made quite firm, when planting and feeding should be done from the surface. Soils deficient in lime should have this added either in the form of rubble at the roots when planting or by top-dressing with newly slaked lime occasionally, lightly pointing this in before mulching the trees.—H.

ORCHIDS.

NATURAL HYBRID ORCHIDS.

EASTERN SECTION.

THE first indication of the existence of natural hybrids amongst tropical Orchids was in 1853, when Lindley correctly indicated the parentage of *Phalenopsis intermedia*. This was before any artificially-raised hybrid Orchid had flowered. Since that time Mr. Seden has proved its origin, as Lindley suggested by the intercrossing of *P. Aphrodite* (*amabilis*, as it was then wrongly called) and *P. rosea*. These seedlings flowered in 1886 and proved identical with *P. intermedia*. Other tropical hybrids have since appeared among importations of plants. In 1886 *Dendrobium crassinode* Wardianum flowered in Messrs. Veitch's nursery. Recently the well-known hybrid *D. Ainsworthii* has been recorded as having flowered amongst imported plants of *D. nobile*. Vandas, too, have produced their natural hybrids. In May, 1894, *Vanda Charlesworthii* flowered in Messrs. Charlesworth and Co.'s nursery at Heaton, Bradford. It is supposed to be a natural hybrid between *Vanda cœrulea* and *V. Bensoni*, and appeared among an importation of *V. cœrulea*. It would be difficult to distinguish it from that variety when the plants are not in flower. A plant recently shown at the Drill Hall by Messrs. Hugh Low and Co. I examined carefully, and failed to find the slightest trace of *Vanda Bensoni*. The habit of growth was that of *V. cœrulea*. The flowers are very similar in shape to those of a small-flowered variety of that species, the colour differing in having a peculiar tint of rosy purple suffusing the segments. In 1897 *Vanda Moorei* appeared with Mr. J. W. Moore, of Bradford. It is a well-known fact that *V. Kimballiana* and *V. cœrulea* grow together, in Upper Burmah. In *V. Moorei* the characteristics of these species are so pronounced that there is no difficulty whatever in identifying its origin. The leaves are nearly as broad again as in *V. Kimballiana*, rather fleshy, nearly flat,

and about 7 inches long. The sepals and petals are pale lilac and most like those of *V. Kimballiana* in shape, but the general characters of the flower are fairly intermediate. It is a very interesting addition. *Cypripedium* have produced natural hybrids. Some few years back Mr. Edward Low drew my attention to a good form of *C. javanico-superbiens* that was flowering among a batch of imported plants. This was interesting from the fact of its giving some idea of the habitat of *C. superbiens* (*Veitchi*), which has long been sought after, the whole of the stock of *C. superbiens* having been derived from two plants. *C. javanico-superbiens* was artificially raised by M. Bleu from the species indicated in the name. The appearance of the plant in Messrs. Low's nursery amongst an importation (I believe of *C. javanicum*) should give some idea as to where *C. superbiens* might also be found. *C. Godefroye* also has been artificially raised in two collections by the intercrossing of *C. niveum* and *C. bellatulum*. Some years ago I was struck with the intermediate characteristics that existed between *C. Godefroye leucochilum*, and suggested to one of our greatest authorities the possibility of the white ground forms being natural hybrids between *C. niveum* and *C. bellatulum*, the yellow ground forms being derived from the influence of *C. concolor* with *C. bellatulum*. This opinion was further strengthened by the fact that among the first batch of plants of *C. Godefroye leucochilum* imported there were found *C. niveum*, *C. concolor*, *C. bellatulum* and typical forms of *C. Godefroye*. The original importation was collected by inexperienced men, which seemed to me to further strengthen my contention, which I am glad to find has proved correct where artificially-raised hybrids have flowered. I have also found *C. nitens* among imported plants of *C. insignis*, proving that the original parentage given of *C. Sallieri* is correct and that it is a natural hybrid between *C. insignis* and *C. villosum*; these species must undoubtedly grow together. There are other natural hybrids which might be mentioned, but their identity has yet to be proved. *Cymbidium* also include two supposed natural hybrids in *C. Traceyanum* and *C. eburneo-Lowianum*. A plant of the latter, exhibited at the Drill Hall some time ago, was said to be, and it bore every trace of being, an imported plant. It came from the neighbourhood of Worthing. The identity of *C. Traceyanum* has yet to be determined. I am assured by Mr. Boxall that *C. Lowianum*, *C. eburneum*, *C. grandiflorum* and *C. giganteum* all grow practically in close proximity to each other, so that there is no reason why natural hybrids should not exist among importations of these species.

H. J. C.

Warrea tricolor.—In habit and manner of flowering this plant very closely resembles a *Phaius* and its culture is very similar, the plant delighting in a sound compost of loam, peat, and Sphagnum Moss. It is not often seen, but I noticed several fine spikes of it the other day. These were about 2 feet high with many flowers, the colour of the sepals a yellowish white, with a pretty bright purple lip. It is very pretty, and the flowers last a long time in good condition, but it is probably not showy enough for present day collectors to trouble about. A moderate amount of heat is necessary, the plant being a native of Colombia. It has been occasionally imported since 1829, the date of its introduction by Messrs. Loddiges, but has never been popular or very plentiful.

Odontoglossum Wallisi.—Although the flowers of this species are not so large or showy as those of the majority in the genus, it is an

interesting and pretty plant. It is easily distinguished from any other kind by the narrow foliage, the petals standing exactly at right angles to an imaginary line drawn through the top sepal and lip, and by its distinct colouring, the brownish tint being margined with greenish yellow. The plant does well in a moderately cool house and should be given rather more root-room in accordance with its size than most other kinds. The plant takes no distinct resting season, but must be moderately watered all the year round, lessening the root and atmospheric moisture a little in the dark days. It is found growing naturally further north than most of the Venezuelan species and high up on the Sierras, where it was discovered by the collector whose name it bears in 1868.

Odontoglossum Harryanum.—It was, I believe, a constant source of regret to the late Mr. Horsman, of Colchester, that this fine *Odontoglossum*, which he was instrumental in bringing to this country, did not do better. Had he seen the fine specimens in the Trentham group of plants at Shrewsbury he would have had little cause to complain, for they were very good, one especially having a remarkably fine spike, apparently a yard or more in height, with magnificent flowers. In this form it is a splendid Orchid, but, unfortunately, newly-imported plants are often allowed to flower themselves almost to death, and they never get over the check. It is best, even in the case of the strongest plants, to remove the flowers as soon as open, and even to reduce their number to two or three when flowering for the first time in this country. Later they make strong growths, and, being established, they carry the blossoms to perfection. The plant likes a little more warmth the first year or two than most *Odontoglossum*s, and should be given fairly wide pots or pans.

AERIDES MULTIFLORUM.

THERE is a great advantage in growing these lovely Orchids, in that many of these flower at a time when there is little else in flower. In the season of gorgeous *Cattleyas* and showy *Dendrobies* one is apt to forget these grand plants, but now when most of the *Cattleyas* are over and the house is conspicuously dull, the *Dendrobiums* daily getting less like plants and more like a bundle of dried twigs and sticks, the ample foliage and glorious racemes of flower are peculiarly attractive. *A. multiflorum* is perhaps the best known of all *Aerides* with the single exception of *A. odoratum*, and though all the varieties are very pretty and useful plants, some of them are much finer in colour and form than others. Culturally, *A. multiflorum* is not usually such a success as *A. odoratum*; its habitat is probably at a greater elevation and in a less sheltered position than that of the latter, but of this I am not sure. Certain it is that while *A. odoratum* can hardly have too much heat and moisture and thrives in a shady house, *A. multiflorum* in all its forms likes a cooler and drier house, in which the growth every season is well consolidated as it is made. Plants grown in this kind of atmosphere flower very freely and regularly, but, on the other hand, if kept year in and year out in a constantly moist and shady house, the flowers will be very few indeed, and those that are produced will be poor in texture and colour. *A. multiflorum* is a fairly free-growing, but not very strong plant, and, like all such, is better treated to a moderate-sized basket or pot than a very large receptacle such as suits a plant of the habit of *Vanda suavis* or *V. tricolor*, or even *Aerides odoratum*, which can be given more material about its roots with advantage. Clean Sphagnum Moss, as usual with the distichous-leaved kinds, is better for this Orchid than any mixture, and all that need be added is a little charcoal and a few

crocks to keep the mechanical state right. In an amateur's collection near by, plants of this species when they get at all sickly are washed quite clear of all material about their roots. They are then laid out for a while to dry, and afterwards all decaying or dead roots are cut off, the stem itself being shortened if at all decayed. In more than one case I have seen a marked improvement in plants of this class brought about simply by cutting off this bad end when repotting, for anything decaying or decayed cannot but have a bad effect upon the plant itself as well as upon the compost. Careless watering after the plants have been repotted has much to answer for with regard to an unsatisfactory state at the roots, and where good Moss, green and fresh, is used, there is little need of watering in a house where the atmosphere is kept correctly moist. Dead Sphagnum Moss loses its natural power of imbibing moisture from the atmosphere, as it were, and it is just this power that has made it such a useful adjunct to successful Orchid culture. But when the Moss is healthy it will keep just moist for several weeks by being lightly damped occasionally, and in this state is just the very best rooting medium that this class of Orchid likes when young. After they have obtained a good hold the water supply will, of course, be much increased and kept up as long as growth is going on, but later on in the winter when the plants rest much less moisture is needed. For reasons above given, the plants are best suspended from the roof, but care is necessary during sharp weather that they are not injured. The flowers of *A. multiflorum* are small individually, but the spikes on good plants are remarkably fine. They are usually a pretty soft rosy tint, one of the best coloured varieties being *A. m. Godefroyanum*, or, as it is sometimes labelled, *Aerides Godefroyæ*, after a famous French orchidist whose name it bears. Of this kind I noticed a very pretty plant with several long spikes in the collection of Mr. H. Rider Haggard, Ditchingham House, Norfolk, recently. The variety *Lobbi* is also a very good one, that called *roseum* being smaller in habit and bearing shorter spikes than the type. It is a very old Orchid, having first been discovered by Dr. W. Roxburgh in Sylhet some years before the present century opened, and introduced to this country by Messrs. Loddiges in 1837. H. R.

Cattleya Mendeli.—This fine *Cattleya* is flowering on the imported bulb at Shipley Hall, and there are some very fine forms open in the way of *C. M. grandiflora*. The lip of this *Cattleya* is among the best of any in the genus, for though not so large as that of the better forms of *C. gigas*, it is very finely frilled and beautifully tinted. The Shipley plants are very fine masses, and Mr. Tallack tells me that most of those imported this year have turned out remarkably well as to variety. Some of the plants are being tried in the Belgian leaf-mould, as grown in various continental nurseries, but it is yet too early to speak as to results.

Cattleya Harrisoniæ.—This is a very pretty *Cattleya*, and I have noted it in good condition in several collections recently. Flowering fairly late in the season as it does, it is more useful than these which flower at the time the labiate kinds are at their best, while the soft rosy lilac tint of the exquisitely shaped blossoms renders it useful for various kinds of decoration when cut. *C. Harrisoniæ* blooms upon the current season's stems, and after flowering should be induced to rest for a few months. At Shipley it does well on blocks suspended from the roof, but growing in this way renders a lot of atmospheric moisture necessary. The thin compost is an advantage.

Epidendrum cuspidatum.—This species is not at all constant in its time of flowering, and I

have noted it in bloom almost every month in the year. The pretty *Brassavola*-like flowers, with their white fimbriated lip and creamy yellow sepals and petals, last a fairly long time in good condition. It does well for cutting for button-holes and sprays, and is altogether a very useful plant to grow. It is of the easiest possible culture, but some growers have found it less free-flowering than most. This is chiefly on account of its being grown in too much heat and moisture, thus keeping it in a state of perpetual growth instead of allowing it to take its proper resting season. A light position in a house that suits the labiate section of *Cattleyas* is best for *E. cuspidatum*, and an endeavour should be made to ripen and well consolidate the growth each season. Immature growths seldom flower freely, and the plants so grown get into an unsatisfactory state. It is a native of the West Indies, where it covers a large tract of country, and, like all such, differs in the size of the flowers in various plants.

NOTES AND QUESTIONS.—ORCHIDS.

Cattleya aurea.—Again this superb *Cattleya* is in flower, and the sunny season has ripened the growth well. I noticed a few nice plants in flower at Shrewsbury in one of the large trade groups, and they always attract a good deal of attention. Many growers still keep this on the stage with the other *Cattleyas*, but wherever there is room the plants ought to be suspended from the roof. The receptacle for the roots need not be large, but perfect drainage must be secured. Water very freely just when the growth is resting, and afterwards in accordance with the weather.—H.

Oncidium macranthum.—There were some extremely fine spikes of this *Oncidium* in the Trentham group at Shrewsbury shown in the way I have frequently advised in these pages, *i.e.*, not tied in any way, but allowed to the fullest extent to show their natural scandent habit. The effect was remarkably good, and I was very much pleased with it. Those who tie this beautiful plant up have no idea of its fine appearance when shown this way.—H. R.

GARDEN FLORA.

PLATE 1239.

EPIPHYLLUMS.

(WITH A COLOURED PLATE OF *E. MAKOYANUM*.)

MENTION of the genus *Epiphyllum* suggests at once the charming winter-flowering *E. truncatum* and its numerous varieties. The species in the coloured plate to-day differs widely therefrom not only in the shape of the flower, but also in the season of blooming, as its showy blossoms are produced in the spring, generally in April and May. *E. Makoyanum* was, according to M. Pynaert in the *Revue Horticole*, introduced from Brazil by M. Makoy in 1888. On April 23, 1889, it was awarded a first-class certificate by the Royal Horticultural Society. There is, moreover, a very nearly allied plant introduced previously to *E. Makoyanum*, and known as *E. Russellianum* Gaertneri and *E. Gaertneri*. Under this latter name it was figured in the *Botanical Magazine*, t. 7201, where it is by Sir Joseph Hooker regarded as synonymous with *E. Makoyanum*, for he says:—

I have retained the name of Gaertneri for this plant as originally proposed, though only as a variety. *E. Makoyanum* was a mere name in Makoy's catalogue, and was adopted by Pynaert under the impression that it was a different species from Gaertneri, which, however, he alludes to when speaking of *Makoyanum*, but gives no characters for either differing from *Russellianum*.

* Drawn for THE GARDEN by H. G. Moon in Messrs. J. Veitch and Sons' nursery at Chelsea. Lithographed and printed by J. L. Goffart.

anum. According to Regel, who published it in 1884, *E. Gaertneri* was introduced by Messrs. Haage and Schmidt from the province of Minas Geraes, in Brazil.

Though the two may be regarded as synonymous from a botanical point of view, yet from a horticultural standpoint there are certain slight, but well-marked differences between them. In *E. Gaertneri* the flattened stems are broader and with a shorter distance between the joints than in the other, while the terminal joints are fringed with prominent hairs (a noticeable feature in the *Botanical Magazine* drawing), but, as may be seen on the accompanying plate, they are almost, if not quite, wanting in *E. Makoyanum*. The petals of *E. Gaertneri* are also somewhat shorter and of a rather lighter tint. As decorative plants the two are, however, on a par, and very beautiful they are, while their cultural requirements are but simple, and, given ordinary care and attention, they will flower profusely.

EPIPHYLLUM TRUNCATUM.—This, the best known and most generally cultivated species, was introduced from Brazil in 1818, and quickly became popular. Numerous varieties after a time made their appearance, many of them differing widely from each other and from the normal form. Some of the brighter-coloured flowers are particularly attractive, and a specimen in full bloom is a very showy feature. This *Epiphyllum* may be treated in different ways. In the first place it can be, and generally is, grafted as standards on to the *Pereskia*, the stem being any height from 9 inches to a yard or more. Next, given a good stout stock, a plant may be built up by inserting several grafts at intervals throughout its length. In hanging baskets, too, it is very effective, in which case grafting is not needed, the object of this mode of propagation being to keep the pendulous branches clear of the soil, so that when suspended that object is attained. A particularly fine example of a grafted specimen standing, I should say, nearly 6 feet high and laden with blossoms was very attractive last winter in the succulent house at Kew. A few good varieties of *E. truncatum* are magnificent, bright rose; salmonium, reddish salmon; coccineum, light red; purpureum, deep purple; Ruckerianum, reddish purple, shot violet; violaceum superbum, purple, light centre; bicolor, white and rose; aurantiacum, orange-red, and Princess, the latest addition to this section and not yet distributed. It received a first-class certificate last autumn, the only variety previously honoured being in 1864. In Princess the flowers are lighter than in the forms generally met with, the petals being white, suffused with purple, which colour is deeper towards the centre than at the edges, while in the throat there is a ring of purple-lake. A generation ago the blossoms of *E. truncatum* and its varieties used to be brought into Covent Garden Market in considerable numbers during the winter season and realised a fair price. At that time the pincushion-like bouquets were more popular than they are now-a-days, and the peculiar oblique-shaped blossoms were often wired and distributed at intervals around the edge. Now, however, the public taste is different and the choice of subjects so extensive, that they are little used in this way, though as specimen plants they are as effective as ever.

E. RUSSELLIANUM.—This is by some regarded as a variety of *E. truncatum*, and by others as a distinct species. It was introduced in 1839 from the Organ Mountains of Brazil, and was named in honour of the then great patron of horticulture, the Duke of Bedford, whose collector, Mr. Gardner, first sent it home. He described it as common on the mossy stems of trees, and also occasionally upon rocks, among the Organ Mountains. The flowers are rose-coloured and borne during the spring months. There are two or three varieties, but they do not show that marked divergence from the normal form which we find in *E. truncatum*.



PROPAGATION.

The Epiphyllums can be struck readily enough from cuttings put into sandy soil and given very little water till rooted, but for reasons above detailed they are usually grafted. The Pereskia, which is employed as a stock, strikes root readily, and should be grown on freely in order to obtain as stout a stem as possible. For grafting, the stock may be cut down to the height required, and, the upper portion being split, the scion, whose base has been fashioned wedge-shape, should be inserted therein and secured in position, either by passing two or three spines of the Pereskia through or by tying the whole securely with matting or grafting cotton. After grafting, the plants should be placed in a shady part of the stove, and if the weather is bright they must be lightly syringed three or four times a day. In about a month the union will be complete, and as soon as this takes place the plants had better be removed to a lighter and more airy structure. When inserting several scions on to one stock, and as it were building up a specimen, the clean incisions should be made in a downward direction in the stock at intervals of 6 inches or thereabouts. The scions being fashioned wedge-shape are inserted into the places prepared for their reception and fixed securely in position. The Epiphyllums are easily grafted, but at the same time they must be fitted together accurately. Grafting may be done at almost any time of the year except in winter, but I prefer to carry it out in the spring or early summer, usually about May.

CULTURE.

The general culture of these Epiphyllums may be soon summed up. After the flowering season is over they should have a period of rest, being kept drier at the roots and in a somewhat lower temperature. Having flowered in an intermediate house, the warm part of the greenhouse will then just meet their requirements. Potting is best done in March or April, a very suitable compost for the purpose being two-thirds good yellow loam to one-third pounded brick rubble and soft bricks, with a liberal admixture of sand. A little well-decayed leaf-mould may with advantage be added if the loam is of a heavy nature. In potting, the soil should be pressed down firmly, and great care must be taken to keep the plant well secured to a stake or stakes, as if this is not done, the weight of the branches is apt to cause them to snap off. After potting, the plants must be kept warmer, with occasional syringings, in order to encourage a free growth, while the supply of water at the roots may be increased, but care should be taken not to overdo them in this respect, as an excess of water may cause irreparable injury. Apart from the open nature of the soil, the pots employed must be thoroughly well drained. As the plants increase in size they may be kept for years without repotting, provided precautions are taken when potting them in the first place to keep the drainage open. In the case of these old-established plants they will be benefited by a little feeding in the shape of weak liquid manure during the growing period, and also just before the flowers develop. After the growth is completed the plants may be removed to a sunny greenhouse in order to ripen the wood and set their flower-buds, giving them at that period somewhat less water than when in full growth. The earliest may be taken into a little heat by the middle of September, and if a few at a time are so treated, a succession may be kept up for a considerable period. For suspended baskets, plants on their own roots are the most satisfactory, as they are better

without any clear stem. Grown in this way the flowers are seen to very great advantage, and the fact that they do not require so much water as many other subjects is greatly in their favour as basket plants, for the watering of them is not always an easy matter. I have also seen the varieties of *E. truncatum* employed for clothing a sunny wall in a warm structure, the wall being faced with network which held in position some rooting material, consisting principally of peat and Moss. Syringed freely during the growing season, the plants under such conditions both grew and flowered freely. The section of Epiphyllums that flowers during the spring months is amenable to the same mode of treatment as *E. truncatum* and its varieties, except that when necessary they should be repotted soon after their flowering season instead of early in the spring, as recommended for the others. H. P.

CORDYLINE (DRACÆNA) AUSTRALIS.

This stately, almost tropical-looking plant has been in cultivation in the milder parts of Great Britain and Ireland for a good many years, and



Cordyline in flower. From a photograph by Mr. Greenwood Pim, Dublin.

when strong and old enough frequently blooms, bearing one or more large, densely-branched panicles of small whitish flowers, followed by abundance of seed, as shown in the annexed illustration. It is nearly hardy, but a severe frost will damage the half-developed leaves, the very young ones, which are enclosed in the cone of older ones, usually escaping. It is, however, easily protected by tying all the leaves up into a bunch, the outer ones protecting all the rest. The plant from which the

photograph was taken is growing close to my house, which is covered with Wistaria, Passion Flower, &c., which form an excellent foil to the Cordyline. At Mount Usher, Co. Wicklow, where there is a large number of old Cordylines, they flower every year, some bearing four or five heads of blossom. G. P.

THE WEEK'S WORK.

KITCHEN GARDEN.

EARLY CELERY.—In the case of the earliest batches of Celery, slight earthing up will now be necessary. Where the least trace of the Celery maggot exists immediate hand-picking must be resorted to, as I know of no effectual insecticide, and if taken in time a lad can soon get through a few rows. When growth is huddled together for earthing up, the pest, if not removed previously, works sad havoc by November, and not only is the general quality inferior in consequence, but decay sets in sooner. Any extra early rows of such varieties as Sandringham White or Early Rose wanted for the dining-room in October may now have the final layer of soil applied and be banked up, and where copious rains have recently fallen, the moisture will by the process be preserved. I always set two men to each row. One can then walk backward and grasp each stick firmly with both hands, while the other brings up the soil. Some gardeners prefer tying up each plant with strips of matting. At any rate, the soil must not be allowed to find its way into the centre. Later rows will now need a little attention, suckers having in some instances grown out of the base. These must all be removed, also all weeds and rubbish, and a thorough good drenching of farmyard liquid given. When earthing up late Celery, a very wet or a very dry state should be avoided. The former encourages early decay, especially should the winter be wet or snowy, while the latter condition is productive of tough, indigestible growth. Where any spare plants were put out in drills for flavouring, a reservoir should be formed by drawing up more soil on either side with the hoe; this will prevent artificial waterings from running to waste. The same treatment should be accorded Celeriac, which, though by no means commonly grown, is a most useful vegetable, especially in hard winters.

THINNING SPINACH.—The plants resulting from the earliest August sowings of winter Spinach will now be fit for thinning. A too free hand, however, must not be used, as wireworm will sometimes attack the young seedlings between now and the final thinning stage. A distance of a foot should be left between each plant when growth is free and healthy. When sown on more exposed quarters a little less distance will suffice, as, being more hardy, the foliage is less liable to suffer from wet or frost. Even where a liberal quantity of soot and lime was dug in when the ground was being prepared, I would advise another sprinkling of the latter as soon as the first thinning is completed, mixing with it a little fish manure and using the Dutch hoe afterwards. This will give the crop a good start and a better chance of resisting grub and canker. Successional sowings must be watched, and, if necessary, cleaned as soon as the young growth peeps through the surface. This crop repays any labour

that may be bestowed on it. I have previously referred to the wisdom of sowing both the prickly and round varieties of Spinach at this season, having proved the so-called summer variety equally as hardy as the prickly, and sometimes one will do better than the other. On heavy soils slugs often attack young tender Spinach, and quickly riddle the leaves if not noticed. A sprinkling of lime and soot or wood ashes occasionally is the best preventive. Where winter Spinach is much in demand and any vacant plots of ground still exist, seed may yet be sown with a fair prospect of success, the produce, provided the winter is tolerably mild, coming in most useful at the new year. For these late sowings a sunny border is preferable. Do not draw the drills too deeply at this advanced date.

AUTUMN CAULIFLOWERS.—These will now demand attention. On hot soils this season Autumn Giant has a very blue appearance, owing to insufficient root moisture. When in this unsatisfactory condition caterpillars often attack them, and the heads turn in prematurely and are deformed and poor in quality. To prevent this give at once a good watering with liquid manure, repeating it in a week's time. This stimulant will soon alter the colour and general condition of the plants. Where the plants are growing in narrow borders that can be easily reached, a good drenching overhead with the hose or garden engine will aid in cleansing filth from the leaves and cavities, benefiting the roots likewise. When the heads are developing, care must be taken to preserve the colour, this being best done by tying up the leaves over them so as to exclude light and sun-heat. Should there be any doubt that the supply will not last out till the required date, the plants may be lifted with as much soil attached as possible and laid in by the heels behind a north wall, allowing a little space between each for a free circulation of air. Walcheren, where growing on Celery ridges, may, if the soil is required for earthing up, be laid in in the same manner. Self-protecting Autumn is unsurpassed for following on the heels of Autumn Giant. It is well protected by its folding interior leaves and comes in piecemeal, keeping in a usable condition in a cool place for some time. If care is used this valuable Broccoli may be had up to the time Backhouse's or other favourite winter varieties are fit for cutting. J. C.

OUTDOOR FRUITS.

APPLES.—The Apple crop, taking it as a whole, is not a very satisfactory one throughout the country, and I hear very bad reports from the eastern counties. Generally speaking, early varieties appear to be giving the best crops, and this being so, it behoves all who wish to make their supply cover as long a season as possible to prepare for gathering slightly in advance of the usual season. A very generally accepted but fallacious idea is that Apples keep best when allowed to hang on the trees as long as possible before gathering, but my experience is quite the reverse of this, as I have always found that most Apples, especially the early varieties, keep best when they are picked as soon as they will part from the tree with their stems intact, even if a fair amount of force has to be used in plucking them. Perhaps this may not hold good when the fruit room is not so cool as it should be, as then some amount of shrivelling will take place, but with a properly-constructed room that can be kept down to shade temperature and that is not over-ventilated, one need not fear shrivelling, and the fruits come up to perfection and will last for weeks longer than they will if allowed to really ripen on the trees. A case that will go far to prove my point here is that for some years I wanted to keep some good dishes of Warner's King for the middle of November, but always failed to do so until I adopted early picking, that is to say, picking when the fruits reached full size but were still quite green, after which I had no further trouble and always had some perfect dishes for the date mentioned,

grand in colour and without the slightest tendency to shrivel. Manks and Keswick Codlins can be well kept in the same way, and that fine useful Apple *Crimson Queening*, which is not nearly so frequently grown nor well known as it should be, will alone cover a season of four or five months if picked early and stored in a cool room. I have not found the colour of this or any other highly coloured variety suffer in the least from early picking. Of course I do not advocate getting off the fruits when they are palpably unfit or all at one time, but what I wish to insist on is that the general tendency is to leave the early Apples too long on the trees, whereas they might be safely housed where they will be out of reach of birds and wasps. It is particularly necessary that no unsound fruit should go to the store, as these soon decay and spread decay to others in contact with them. Methods of storing have greatly improved of late years, and it is almost needless to mention that no fruit should be placed on straw, hay, or any other dried vegetable matter, as all such things soon acquire a mustiness which is transferred to the fruits as they ripen and spoils them. The very best thing I have found for storing benches is slate, but as slate benches of sufficient thickness to bear a heavy weight are expensive, the advantages gained by the use of slate can be attained in a more economical manner by covering the ordinary lattice shelves of the fruit room with roofing slates; these will take up some of the moisture given off now by the fruits and will remain cool, slightly damp, and equable in temperature—just the conditions which suit the fruits best. If board shelves only be used in the fruit room, they should be of some sort of white wood which does not contain resin or anything that would taint the fruits. For preference they should be close-boarded, as the sharp edges of lattice-work shelves frequently bruise and spoil one's best fruits.

PEARS.—These will require still more attention to gathering than Apples, for they vary more in their seasons of ripening, so that no hard-and-fast line can be laid down with regard to them, and only the experienced cultivator will know just when it is best to pick. Some of our best Pears, such as *Marie Louise*, may be greatly lengthened in season by being picked in batches of a few dozen at a time, the quantities at the first pickings being regulated by the demand. *Duchesse d'Angoulême* and a few others which ripen up naturally during September and October should be treated in the same way, while late varieties are best left on the trees as long as they will hang, or until the nights begin to get very frosty.

PLUMS.—Wasps and bluebottle flies, the latter especially, have been particularly troublesome this year, and Plums suffer a great deal from their attacks. Where the Plums are wanted especially for cooking it is best to pick them off before they become quite ripe, as many of the cooking varieties keep well if put in single layers in a dry and cool room, provided they are not over-ripe when picked. As regards dessert kinds, these must be allowed to ripen on the trees, and in a scarce season like the present it is worth while to protect the best fruits individually by enclosing each in a separate piece of very thin muslin, which should be big enough to hang loosely round the fruit, so that it may dry quickly after a shower. Later on, as the fruits ripen, they should be picked on a dry day, and each sound fruit which can be spared for the time should be wrapped in a piece of tissue paper and put away in a drawer to keep till required. *Coe's Golden Drop*, *Ichworth Impératrice*, and *Reine Claude de Bay* are a trio that can be depended upon to keep well in this way, but they must be stored in single layers and kept quite dry and cool, having an occasional look over to remove any fruits that may be decaying.

PROSPECTIVE PLANTING.—Though early yet to think about commencing the planting of outdoor tree or bush fruits, this is an excellent time to go to the nurseries and see as well as to order any stock that may be wanted, and where more than

a dozen or so of trees are to be selected there is a great deal to be gained by being early in the field in this respect. I like to see the stock growing, as a much better idea of their fruiting capacity and general quality can be gained by seeing the trees in leaf, and possibly in fruit, than can be formed later when the leaves are gone. There is also the satisfaction of being able to make one's own selection, so that there may be no mistake as to variety, &c. The long-continued drought has made ground operations almost impossible, but as soon as the soil is in fit condition it will be best to get the work in hand, double digging any ground that may be set apart for tree or bush planting. This is more satisfactory than digging pot holes, however big, for by double digging the entire plot well in advance of planting, the ground settles together and there are no hard sides—difficult for the roots to penetrate—left to the holes when dug. If there is plenty of burnt earth and wood ashes at hand, a heavy dressing of these before digging will be helpful, but if the supply is limited it will be better to reserve it for use near the roots when planting. No manure should be used except, perhaps, for bush fruits.

CORNUBIAN.

FRUIT AND VEGETABLE CROPS.

NORTHERN.

Wythenshawe, Northenden.—Apples in this garden are very few, and in the neighbourhood they are generally scarce, though some have fair crops here and there on *Stirling Castle* and *Grenadier*. Pears may be termed moderate, the frost we registered at the latter end of May and the ungenial, dry weather which extended into June being unfavourable for the setting of the bloom. Of Plums we have none, and which is general in this neighbourhood. Cherries in the open are a light crop, but on walls *Morellos* are better. Black and Red Currants and Raspberries are very good, and so are Strawberries. Gooseberries are mostly a light crop. Some complain of the birds as the cause, while in many cases the early blooms were caught by frost, and those which opened later gave a few berries, but only making a very light crop.

Vegetable crops are now looking better since the rain came. Early Cauliflowers on good ground have done well, while later ones had not made much headway before the acceptable rain. Peas are very good, especially where previously well supplied with manure. Other crops of vegetables are looking well, except perhaps in some cases Carrots have had an attack of fly, and Celery, having been well supplied with water, is looking very well.—JAMES DALE.

Kirklevington Hall, Yarm.—The fruit prospects here are not so satisfactory as they promised to be at the flowering season, particularly in the case of Apples, the late frosts and cold, dry weather having crippled the bloom. Apples are a light crop; Pears moderate; Plums quite a failure. Gooseberries are the lightest crop we have had in this district for many years. Strawberries, Currants (Red and Black) are a good average crop; Cherries are thin; Raspberries are an abundant crop and good.

Vegetables have done fairly well where watering has been attended to. Peas and Potatoes are turning out well.—ALEXANDER CUNNINGHAM.

Hurworth Grange, Darlington.—In the spring everything gave promise of a fruitful year, all kinds of fruit trees being laden with bloom, but late frosts and dry cutting winds have once more caused disappointment. Apples, Pears and Plums are very thin. Cherries, both dessert and cooking, are a fine crop. Peaches in case and Apricots that were protected with a good canvas sheet are both good. Gooseberries, Black, White and Red Currants are a good crop, the fruit fine, the rain coming at the right time for them. Strawberries were plentiful, but we got the dry weather when they were swelling and the wet when ripening, so that a great many rotted

before being ready to gather. Raspberries are good. Tomatoes plentiful.

Early Potatoes are small; early Cauliflowers moderate; early Peas did not fill well; midseason and later ones look better. All kinds of summer and autumn vegetable are doing pretty well.—J. SIMPSON.

Broughton Hall, Yorks.—This spring was most disastrous to Peaches, Pears, Plums, and Cherries, not so much the frosts as the continuous parching east winds. Never did the fruit trees promise better. Peaches, Plums, Pears, and Cherries were exceptionally full of fine healthy blossom, and though well protected with fish netting and canvas at night the crops of all kinds mentioned are thin. Blister on Peach trees is very bad, but, thanks to a more congenial summer, the trees are now in excellent health and vigour. Apples, Strawberries, and bush fruit are abundant, Black Currants excepted. For several years past I have never had the magnificent crops of Black Currants I used to have.

Peas and Cauliflowers are very late; midseason crops of the latter almost a failure; Peas excellent, thanks to timely mulching. Potatoes are excellent. The recent rains have improved vegetables of all kinds. Midseason and late Peas are excellent.—J. RAINBOW.

Chillingham Gardens, Belford, Northumberland.—Owing to late frosts all the early blossom on the Apricots was killed, but a few late blooms were saved. They never looked better, but 28° of frost on March 24 was too much for them and a lot of branches died as well. Strawberries have been a heavy crop, especially Royal Sovereign; Raspberries a good crop and very fine; Gooseberries a failure; Black and White Currants good, Red have often been better. Cherries are very light, also Peaches and Pears; Apples a fair crop on some trees; Plums a light crop. Wineberries are looking well, likewise Wilson's American Bramble. The Loganberry is but a light crop. Nuts are splendid.

Peas, Cauliflowers, Beet, Carrots and Cabbages are all very good. Potatoes are poor, likewise Turnips, Lettuces, French Beans and Onions, as a lot of the seed never came up owing to the cold and wet. It rained less or more for ten weeks all but three days.—R. HENDERSON.

Burnhopeside Hall, Lanchester, Durham.—We are at a disadvantage in this district compared to the more southern counties. Apricots and Peaches are very precarious unless they are well protected. Peaches and Nectarines inside are good; Apples, Pears and Plums are thin; Morello and Sweet Cherries are a fair crop; Strawberries and Raspberries are good.

Vegetables are doing well, the late rains suiting them well.—CHARLES LACEY.

Edenhall, Langwathby.—The fruit crops in these parts are, I think, a good average. Strawberries and Raspberries are very heavy and the fruit fine. Apples and Pears are a good crop, but Plums are a failure. Apricots and Peaches are good, as also are all bush fruits.

All vegetable crops look very promising.—ARTHUR SMITH.

Naworth Castle, Carlisle.—In this neighbourhood the fruit crop is below the average, Apples, Pears, and Plums being scarce. Black, Red, and White Currants have been plentiful, also Raspberries and Cherries. Strawberries have also been a heavy crop, but owing to the severe drought in June their season has been short, though on a late border Eleanor and Elton Pine are still (August 14) carrying a nice crop of fruit.

Vegetables on the whole are now doing well. The earliest sowings of the Brassica family, especially Cauliflowers, were more or less ruined by grub. Carrots in most places are almost a failure from a like cause, and early Turnips were severely checked with drought and fly. Onions are doing well, and though the maggot is again with us, nice crops will be saved, especially those raised inside and transplanted, they being quite free from grub. Early Peas did well; midseason varieties not so satisfactory, and birds have made

matters worse, even nets failing to ward off the tomtits and other small birds. Potatoes are a splendid crop all round, with up to this date no appearance of disease.—JAMES HILSON.

Harewood House, Leeds.—Apples are on the light side, but promise to be of good quality. So far the trees are clean and healthy—at least the young ones and those that were lifted and root-pruned some years ago. I find the young trees that were planted on entirely fresh ground doing best. Further experience teaches me that it is a waste of time bothering with old trees, even although they look as if they could be improved. The following varieties have borne well for the last four years and promise to ripen fruit of fair quality this year: Alfriston, Lord Derby, Warner's King, Ecklinville (this and Stirling Castle seldom if ever fail here), Winter Hawthornden, Lane's Prince Albert, Peasgood's Nonsuch, Potts' Seedling, Lord Suffield, Cellini and Northern Greening. Pears are to be a very light crop, the best being Williams' Bon Chrétien, Jargonelle, Clapp's Favourite, Louise Bonne of Jersey, Souvenir du Congrès, Brown Beurré and Pitmaston Duchess. The last, grafted on the top of a horizontal-trained tree of Beurré de Capiaumont, promises to ripen some excellent fruit, very large for this district and perfectly free from blemish or spot of any kind. Plums are light; Apricots fair; Cherries good. Peach trees have suffered from blister and the crop is very poor. Strawberries are a fair crop. Royal Sovereign is certainly the best sort grown here either for forcing or outside work; next come Keens' Seedling and President. Small fruits (except the Black Currant) are a good crop; Red Currants are a heavy crop; Gooseberries also. No caterpillars so far have made their appearance on the Gooseberry. The worst enemy here this season is the American blight on the old Apple trees.

Vegetables have done very well, Peas in particular. May Queen and William I. were sown end of February and ready to gather second week of June, which is considered early here. Prince of Wales, Duke of Edinburgh, Telephone, No Plus Ultra and others promise well. Cabbages, Cauliflowers, and Broad Beans are healthy and doing well. Potatoes (late sorts) look very well; early sorts have been very small, but of good quality. Spinach, of which there have been many complaints of not doing well this season, has been grand here. Lime has been freely applied in the gardens here and we are seldom troubled with either Onion or Carrot pests.—J. JEFFREY.

Kimbolton Castle, Kimbolton.—Apples, Pears, and Plums are a very poor crop, though there was plenty of bloom, the fruit falling off after setting. Peaches are an average crop, but Apricots are quite a failure. Gooseberries, Currants, and Raspberries were very good and fine. Strawberries are an average crop, but fruit very small owing to the frost, which cut all the earliest and finest blooms. Morello Cherries are only a fair crop; Nuts are very scarce.—J. HEWITT.

Abney Gardens, Cheadle, Cheshire.—The fruit crops here are very poor. This is about one of the worst years we have had for a long time. Strawberries certainly have been well got, but the crop is short and a lack of fine fruit. This could not be otherwise, as a large proportion of the early blooms was killed by frost, as we could see them black in the heart when the flowers were open. Raspberries are a good crop; so are Black Currants. Red Currants and Gooseberries were very much injured by sparrows taking the buds. There are no Plums, very few Cherries, scarcely any Pears, and Apples are not a general crop. Grenadier, Cellini, Lord Grosvenor, and Potts' Seedling have good crops; many of the other trees have scarcely a fruit on. Lord Suffield that here usually does well has scarcely a fruit on.

Potatoes have done well, and these generally hereabouts are looking well. Puritan I find still our first early, then Sharpe's Victor. I have had some very good early Cauliflowers, Dean's Snowball first and then Early London. I transfer them two in a pot to the open ground and leave them so, as nice moderate-sized heads are quite

right for the kitchen. Early Peas are over; they were William I. and Gradus. The former was the better with me. Later Peas, No Plus Ultra, are looking well. Onions, especially those raised under glass in January and planted out in April, are in very good condition. Brussels Sprouts for winter are also looking well.—ROBERT MACKELLAR.

Abbotswood, Furness Abbey.—The Apple crop here is a very heavy one, much above the average, but Pears are very scarce all over the district and Plums under the average. This is a bad locality for stone fruit. There is a good crop of May Duke Cherries, also Morellos. Strawberries Eleanor and President are cropping well, with finely coloured fruit. Gooseberries, Currants, &c., are heavy crops.

Vegetables are not so good owing to the cold, wet spring; some varieties of Peas are bearing a heavy crop.—I. SINGLETON.

Birdsall Gardens, York.—I consider it one of the worst fruit seasons we ever had. Apples, Pears, Plums, Cherries, and all kinds of bush fruits are under the average. Strawberries have been very good from plantations made last autumn, which says much for annual plantations of this useful fruit. Old heds have been good, but not equal to the new beds. There are exceptions in the new beds; for instance, 400 strong young plants of Laxton's Monarch have not shown a truss. My best varieties are Black Prince, Royal Sovereign, Noble, President, Sir J. Paxton, and Gunton Park. The last is one of the very best for packing and sending a long distance, and excellent in quality. Apricots on outside walls are a failure. I have a good crop in the Apricot shed. Peaches on outside walls usually carry good crops here, but this season we have none. There are some trees of Victoria Plum in this district carrying heavy crops, also large old trees of the old Hesse Pear with good crops.

Early Potatoes were damaged by the late frosts in May, and consequently are very small but good in quality. Asparagus is very good. Peas have done well. We have a good early variety in Thomas Laxton, excellent in colour and flavour. A sowing of this variety was made here on April 3, and they were in condition for gathering on July 1. Other varieties that do well here are Veitch's Early Marrow, Maincrop, Prodigy, Autocrat, British Queen, and Champion of England, still one of the best. Late Potatoes are looking well.—BAILEY WADDS.

EASTERN.

Bloxholm Hall Gardens, Lincs.—Our fruit crops here are generally very scanty this year. During the flowering season Apples, Pears, Plums, Peaches and Apricots were laden with blossom, and an excellent fruit year seemed inevitable, but late sharp frosts quickly did their destructive work, blasting our hopes of a fruitful season to a great extent. Cherries, both sweet and Morello, are an average crop and of good quality. Of Apples, Keswick Codlin, Lord Suffield, Stirling Castle, Bramley's Seedling and King of Tomkins Co. are average crops, of good quality, but these few embrace all the varieties that we have anything of a crop on at all. Pears are still worse, and I cannot name a single variety on which there is anything approaching a crop. The same remark applies to Peaches and Apricots. Of bush fruits Gooseberries were a failure, whereas Red and Black Currants were both heavy crops of fine quality. Strawberries were poor.

Early and main-crop Peas have been excellent both in quantity and quality. Early Potatoes very fair; main-crops give good promise.—W. LUMSDEN.

Shrubland Park, Ipswich.—The scarcity of bloom on fruit trees this spring, which in some instances had in consequence of the mild winter been forced on before its usual season, did not give hope of heavy fruit crops, but, all things considered it is surprising to see as much fruit as we have. We have fair crops of the following sorts of Apples: Court Pendu Plat, Cox's Orange Pip-

pin, Ribston Pippin, Warner's King, King of the Pippins, Peasgood's Nonsuch, Gloria Mundi, Ecklinville Seedling, Blenheim Orange, Manks and Keswick Codlins. Pears are under the average, but a few trees are carrying good crops, notably Doyenné du Comice, Emile d'Heyst, Pitmaston Duchess, Louise Bonne, Marie Benoist, Vicar of Winkfield, Knight's Monarch and Catillac. Damsons are a good crop, but other stone fruit is scarce. Apricots are an entire failure. Red and Black Currants, Gooseberries and Raspberries are plentiful. Strawberries were a good crop, but the fruit was small; that I attribute to the drought last season and the consequent weakening of the plants.

All vegetable crops are doing well. Peas, where good cultivation has been given, are a good crop, and as yet the later varieties are not showing the slightest trace of mildew. Early Potatoes have been good. The later varieties are doing well and rain has fallen just in time to help them forward.—G. TAYLOR.

The Gardens, Gunton Park, Norwich.—In this part of Norfolk, along the coast, Apples and Plums are a very bad crop. A few trees of Czar and Early Violet are fair; other kinds a complete failure. Late-flowering Apples, like Court Pendu Plat and Colonel Harbord, escaped the bad weather and have set a fair crop; other kinds miserably thin. Pears on walls are very fair; most of the kinds required some thinning; trees fairly healthy and clean; Pear slug not so troublesome as in former seasons. Cherries are good, especially Bigarreau Napoleon, Elton, and Black Tartarian. Morellos set well, but have turned yellow to some extent and fallen, owing to the intense drought and heat. Strawberries, Raspberries, and Gooseberries are good crops. Strawberries lasted a shorter season than usual, owing to the great heat and drought. Currants, White, Red, and Black, are under average and small on light soils. Walnuts very plentiful. The most reliable and latest Strawberries are Latest of All, Waterloo, and Lord Suffield. There is a great demand for late Strawberries here, near the coast.

Potatoes, although smaller than usual, are wonderfully good in quality. First and second earlies are ripe, or nearly ripe, and may be lifted out of harm's way, as, when the rains come, disease and second growth will be sure to follow after this extremely dry and hot period.—W. ALLAN.

Huntingdon and St. Neots.—Apples only half a crop, after a splendid promise. Pears are good on walls; on standards a failure. Peaches and Nectarines are poor; trees badly mildewed; Apricots a complete failure. Plums are poor; Victoria and Gages fairly good crop; Morello Cherries excellent; sweet Cherries do not succeed in this locality. Raspberries, Currants, and Gooseberries are heavy crops, and all clean and good; Strawberries about half a crop and rather small, owing to early blossoms being cut by frost. Filberts and Walnuts are thin, scarcely half a crop. Our crops upon the whole are much under the average.

Potatoes are good, but rather late. I still consider Ringleader the best early Kidney in cultivation, followed by Duke of York and Ideal. Cauliflowers good, but soon over, owing to dry, hot weather. Early Peas and Beans were good, but late crops a failure. Onions raised in heat and transplanted are excellent, while the spring-sown are very small and poor. Carrots excellent, also Cabbage and French Beans.

Flixton Hall, Bungay.—In this district, with the exception of most of the small fruits, the crops are very unsatisfactory. In the early part of the year the trees looked very promising, but severe frosts during the week from March 19 to 25 destroyed all the strongest blossoms, both open and in bud, on Peaches, Nectarines, and Apricots. During that week we had from 20° to 23° of frost. With so much frost, three and four thicknesses of fish netting afforded but little protection. Pears are only a light crop and Apples the same. The latter were late in coming into blossom, and I have always observed that if the

trees are in blossom and nearly in full leaf at the same time we rarely get a good crop of fruit. Cherries, both on standard and trained trees, are fairly good. Plums are partial. Gooseberries nearly all dropped off in a young state owing to continual frosts, the foliage at the time not being sufficiently forward to afford the young fruit protection. Strawberries, Raspberries, and Currants are plentiful and good.

All kinds of vegetables are looking well. Peas have been and are still abundant. Potatoes on heavy land look well and the crop promises to be very good, but on light land they are not quite so satisfactory, for, owing to the want of rain, the haulm is turning yellow and the tubers are small.—H. FISHER.

Babraham, Cambridge.—The fruit crop in this neighbourhood is not a good one this season. Apples are very uneven. The Codlins seem the most plentiful. Ribston and Cox's Orange have a crop, and King, Mère de Ménéage, Newton Wonder, Peasgood's, Wealthy, Queen, Prince Albert, and a few different Pearmaines are also bearing. Plums are scarce, except on walls; Pears the same. Cherries are a very fair crop. Apricots, Peaches, and Nectarines are the thinnest crops I ever had. The severe frost on March 20 (33° at 2 feet from the ground) was

Onions are excellent this season. Most were sown in boxes and pricked out into their quarters.—J. HILL.

TREES AND SHRUBS.

OLEARIA HAASTI.

This bids fair to become—in some districts at least—nearly as common as the ubiquitous Privet, for it occurs in most gardens large or small, and very few evergreen shrubs hold their own so well within the smoke and dirt of London as this New Zealand Daisy Tree, which is just now producing its tiny white flowers in great profusion. The fact that it does not bloom till the month of August, when few other shrubs are in flower, is a great point in its favour. In several places along the embankment at Chelsea it is laden with blossoms. This Olearia forms a dense-growing, somewhat lumpy bush, clothed with deep green Box-like leaves. It is not nearly so graceful as some other species, but as a set-off is far hardier and more indifferent to soil and situation than any of the rest. Many only succeed in favoured



Olearia Haasti. From a photograph sent by Mr. F. Rossiter, Bath.

more than any blossom could pass through although heavily protected. Trees that were not in flower at the time are all right. Sea Eagle, Princess of Wales, Gosbawk and Barrington Peaches, and Lord Napier Nectarine have suffered the most in consequence of their being earlier to bloom. Gooseberries in this garden are nearly a failure, but in some places near are good. Raspberries are a fair crop. Black and Red Currants are good. Strawberries are a very short crop. Nuts are scarce. The season has been very indifferent. Cold winds and drought with late frosts have been all against good fruit crops, without taking into consideration the drought of last year, which must mean failure on light soils for the next year's fruit.

Vegetables were late, but very good and plentiful. Peas were late. Sutton's May Queen is very early, but too tall for borders. I still rely on Chelsea Gem and Sutton's Marrowfat Seedling for the earliest crop on borders, and Earliest Marrow for the open quarter. On some damp ground I had Criterion and Duke of Albany—a better lot no one could wish for. Potatoes will be small this year. I grew on an early border Veitch's Improved Ashleaf. No one need wish for a better kind. The crop was very heavy and the tubers smooth, white, and of good flavour.

districts, such as the south of England and Ireland, and in many places need the protection of a greenhouse. *Olearia Haasti* is readily increased by cuttings from 4 inches to 6 inches long, put into pots of sandy soil, and kept in an ordinary garden frame till rooted. If taken about midsummer they will be struck by this, but the present is also a very suitable time, as they will produce roots before winter. Of course, the frame must be kept close and shaded during bright sunshine. H. P.

Rhus Cotinus.—I noticed a very finely feathered plant of this in a Nottingham garden recently, the long fluffy tendrils very bright for a town garden. It is very effective when grown singly on a lawn and allowed to spread naturally, the plant having a very distinct habit that, though it cannot be called elegant, is quite suitable in such positions. Propagation is effected by cuttings of ripened wood and by suckers, that in some soils spring up very readily. A light, open soil, a high and dry position, and not too much exposure suit it best.—H. R.

Rubus phonicolasius.—This interesting berried plant is much in need of improvement so far as its fruits are concerned, whilst as a Bramble

it is the most ornamental of all the fruiters, yet the fruits are small, though most profusely borne, and are much inferior to those of an ordinary Blackberry. Possibly an infusion into it of good Raspberry blood might add to the merit of the fruit appreciably. That crosses between Brambles and Raspberries have produced some fine results, as also some worthless ones, we have had evidence. Golden Queen Raspberry and The Mahdi, a very black Raspberry, are capital and make valuable additions to our stocks. Of these fruits, *Rubus laciniatus* under good culture is the most prolific and profitable of all Blackberries, and Mitchell's Selected, a very fine form of our common Blackberry, shows what can be done by patient selection. Some day, perhaps, we may secure both red and white or yellow Bramble-berries.—A. D.

PARK AND WOODLAND.

WHERE TO PLANT.

LATITUDE.

LATITUDE, as we all know, affects vegetation all over the world, and it is one of the conditions that the planter has the least control over. By latitude I am here referring to the distance of any point from the equator. That the influence of latitude on vegetation is marked within certain wide limits is certain, but within say a line of 1000 miles long, or about the length of the British Islands, it is not so marked. One may travel pretty well from the Grampians to a point a good distance beyond Paris without seeing much difference in vegetation, but much depends on the configuration of the country. This is true particularly of Great Britain as regards forest trees and farm crops. It has often been said that the Scotch Fir, Spruce, and allied species are the only trees fit to plant in the north, but the assertion is far from the mark, for whereas these trees, where the local conditions are suitable, thrive just as well south as north, while the species regarded as tender, like some of our broad-leaved timber trees, do as well in the north as in the south, and in some places better. If a distinct exception can be made, it is the Oak. It certainly does not grow so fast anywhere in Scotland as it does in the midlands and south of England, and the quality of Scotch Oak is, as a rule, inferior, being more subject to ring-shake and frost cracks. According to accounts of the members of the R.S.A.S., the Oak in the south of Scotland has been found to be so badly ring-shaken as to be wholly worthless as a crop. This was on an estate near Peebles. Further north, in Aberdeenshire, I was shown fairly well-grown Oaks the trunks of which had been rent by frost. The proprietor told me that in severe winters the cracks were so wide in some trees that he could push his fingers into them easily. Such cracks close again in summer, but in some trees they bleed freely when the sap begins to move. I have often seen cracks in the Elm in Yorkshire that I could shove the blade of a knife into, but mature Oak shaken in that way is not very common.

With exceptions like these over the whole of Britain, from north to south, I should venture to say that the forester might plant with every prospect of success nearly the whole of our British forest trees regardless of latitude, provided he chooses his species according to aspect and elevation. I am of opinion that no greater mistake has been made in Scotland within the last 100 years than that of planting too many Firs, exclusive of Larch, and too few broad-leaved species—hardwoods. I had last year to report on the woods on an estate north of the Tay, and could not help thinking how much

the estate had lost in value by the planting of the wrong species, Scotch Fir and Spruce predominating everywhere, which could not at the present time be given away, and which it has always been known would never be of much value; whereas Ash, Elm, Beech, and Sycamore, it was equally well known, could be grown to perfection and to a large size in less time than the Firs, which they over-topped wherever mixed, while making also grand park and hedgerow trees. A reference to the estate books showed that nothing but the last-named species had been sold for many years, and the prices got were exceptionally high, especially for the Sycamore, which was sent (good butts) to England. These remarks apply to many spots in the north of Scotland. A few degrees of latitude is hardly felt provided there is natural shelter, and the forester may often do much by choosing his situations. Many gardeners, foresters, and especially gamekeepers, who have never crossed the Tweed have a notion that Scotland is a region of snow and ice during a large portion of the year. It would surprise them to find parts not unlike Kent as far north as Forfarshire. The Vale of Strathmore is an example. This great tract of almost level land, sheltered on the east and west and protected by the Grampians on the north, is a paradise of the farmer and gardener. The soil is also rich, and crops of all kinds are excellent. Peach Royal George on open walls I have seen well over in September, Plums dead ripe, and Apples (fine sorts) the same. Hardwood forest trees equal anything found in the most favoured parts of England. The farming is of the highest order, and the farm-steadings are probably not surpassed anywhere. The Carse o' Gowrie, Carse o' Stirling, and many other places might be mentioned equally favourable to agriculture and forestry. Even in Ross-shire and beyond the Moray Firth the climate is delightful, although the exposure is eastward, while the mildness of the west of Scotland and its islands where the cattle are pastured all the winter is proverbial. Brown, who knew just as much about the climate of Great Britain as he did about forestry, professes to speak with the greatest confidence on the suitability of the soil and climate of Great Britain to the growth of trees, and tells us things that have not a leg to stand upon. For example, all that part of the country between the river Tees and the Firth of Forth is, we are told, "fourth-rate" both in respect to soil and climate for hardwood trees, whereas both are generally first-class. Beyond that from Edinburgh and Glasgow and further north the conditions are fifth-rate, while the greater part of the country "to the north of the central plain of Scotland" is generally unsuitable to any trees except Pine and Fir. That, we are told, is the Pine-growing region of Britain ("Forester," page 11). England has long been a Pine-growing region, especially the south, and before long it will probably have more Scots Fir in Hants, Surrey, Sussex alone than there is in all Scotland. The Germans say the Scots Fir is eminently a low country tree, preferring warm situations, and the Dutch allotment holders grow crops of it for deals in their small plots. Also on the warm, sandy lands near the Maine you may travel for miles through Scots Fir alone, and islands of Scotch logs float down the Rhine past Bingen every day. It was such teachers as Brown that led unquestioning, well-meaning Scotch proprietors to go on dibbling in Firs in the belief that nothing else would grow, and who now find their estates of much less value than they might have been. Travel over Scotland anywhere you

choose, up the eastern and down the western side, between the borders and the Caledonian Canal, and without leaving the train, it may easily be seen how far wrong we have hitherto been about the climate and trees. Some of the finest examples of Ash, Elm, Sycamore and Beech I have even seen have been in the highlands of Scotland, in the gullies and glens where nothing else would grow. There are or were some remarkable Ashes at Dunkeld. At Belmont Castle, Forfarshire, the hardwood trees for their size and height are a feature, and one patch of Beech in the park called the "Straight Beeches," and much thought of for their tall, clean, cylindrical trunks, are the finest specimens I ever saw, except in the Beech forests near Louterburg. I took their height and girth last year. At Monymusk, a little beyond Aberdeen, there are also fine examples of hardwoods, and, if I remember rightly, several large Walnut trees.

ASPECT.

So much for latitude. Throughout Britain I think it may be almost ignored, and conditions of aspect and exposure only considered. These mean far more than soil. Three-fourths of the solid substance of trees come from the atmosphere through the leaves, the rest from the soil. The agents, therefore, that promote the growth of the leaves, the main timber-producing agents, must be of most consequence, and these are heat, light and moisture at the root. Supply these, provide a root-hold in a medium where the few mineral substances required from the soil exist, and they are rarely absent in the poorest soils, and all the necessary conditions of tree life are present. By heat here is meant full exposure to the sun and shelter from cold winds and currents. The late Mr. John McGregor, of Dunkeld in his evidence before the forestry committee said that the value of the Larch crop on one hill varied to the extent of £80 per acre, or thereabout, between the top and the bottom, that at the base of the hill being worth £100 and at the highest point £20. He told me the same thing himself when I was at Dunkeld. This difference was not due to soil, but to altitude and exposure. Numberless examples of this kind could be given, in some of which the difference amounted to 50 per cent. as regards bulk and value. Situation is indeed a question of the very first importance to all planters of trees, because it may far more than turn the scale between profit and loss. In some parts of Yorkshire the Wellingtonia has ceased to exist wherever the situation was exposed, but where planted low down in sheltered spots it has done well. I lately cut boards nearly 15 feet long that measured about 15 inches in the middle out of one tree that I saw planted just over thirty years ago. Grown in masses, I believe this tree will yet come to the front as a timber tree of quick growth. The Douglas Fir and all the Spruces love deep declivities facing east or west or, in the south, north, but shun exposed knolls and dry soils.

For some reason or other planters in the past have often preferred mountain-tops or high elevations on the plea of shelter, but I much doubt the utility of such schemes. For cattle shelter it would often be better to build dry stone walls. The time that such exposed plantations take just to become established is wearisome, and the Government has found that out, I believe, in their plantations near Barroole, in the Isle of Man. What a contrast these plantations afford to the forest of Glen Ellen, not far off Peel, in the Isle of Man. This was a lonely, bare glen when the proprietor conceived the idea of planting it from end to end, and now it is a forest of tall Larch, Scotch

Fir and other trees, and one of the most popular places of resort for visitors in the island. The soil is poor, lying upon the silurian formation, but the glen is a sun-trap. Everywhere in the forests of the Hartz Mountains the effects of altitude and exposure are visible, and the range is from 1000 feet to fully 3000 feet, the base of the mountain range being, I believe, about 1000 feet above the sea. Of course, at such altitudes Beech and Spruce plantations in time become trees of considerable height, through close planting and dense nursing, where they would otherwise be mere scrub, but the difference between the highest and lowest compartments is just as conspicuous as in Scotland. In planting at the highest points, 10,000 or 15,000 trees to an acre are put in in order to establish the overhead canopy quickly, and thinning is long delayed and the rotation period has to be extended proportionately.

In planting hills the tops are usually planted in preference to the lower parts, because, we suppose, the soil is believed to be better lower down and of more value for other purposes, but that only applies to the soil of the valley proper which it is not proposed to plant. The denudation of steep hills goes on from top to bottom wherever the slope is at all steep; hence the soil is much the same all over, and as far as that goes it is just as wise to plant at the base and proceed upwards, clothing the hill as planting goes on. At any rate the returns from the lower levels will be much earlier and better. This is demonstrated everywhere in parts of the country like Derbyshire and parts of Scotland where narrow glens alternate with low hills that have been planted with trees at different periods. J. SIMPSON.

ROSE GARDEN.

PEGGING DOWN ROSES.

IN advocating the pegging down of Roses I am not suggesting anything novel; indeed, our forefathers adopted this method of culture on a far larger scale than is done at the present day. One need not go far to find natural exhibitions of the system. They are to be found in any hedgerow where Dog Roses abound. Perhaps a long growth has been caught by some neighbouring branch, and consequently held in a horizontal position, or the weight of the shoot has caused it to bend of its own accord. In any case the result is the same—viz., long growths smothered with delicate and fragrant blossom. Every gardener must have noticed upon a fine standard of Gloire de Dijon where the knife is almost a stranger at pruning time, how the long growths swaying in the wind are studded all over with buds and blossoms. It is entirely against the laws of Nature to prune Roses in the reckless manner now adopted. I believe in removing old worn-out wood, but the fine new growths if well ripened should be either very slightly cut back or bent down and pegged.

The illustration of some plants of Ulrich Brunner pegged down shows better than words what is possible in this style of Rose culture. It is pitiable to see the fine growths of this noble Rose rising some 5 feet or 6 feet high and to know that next spring more than half of this wood will be cut away. These growths contain some three dozen eyes, that if pegged down would yield certainly two dozen sprays of blossom; whereas with the usual mode of culture not more than half a dozen would emerge from the growth when pruned. Supposing one has two or three of such growths upon a plant,

what a grand lot of blossom may be secured by pegging them down.

The system briefly is this: In the month of March one, two, or more of those fine shoots that are found upon healthy plants of the vigorous growing kinds must have their points slightly removed. The small twiggy growths in the centre of the plant, also very old wood, should also be removed, the object being to encourage strong basal growths to succeed those now about to be pegged down. The ground should be forked over, burying the manure that has been applied in the autumn. Some strong galvanised iron pegs are then thrust into the ground so that about 1 foot of them is left above, and the long growths already alluded to bent down and attached. If there is any fear of late frosts it is advisable to delay the bending down for a time, for, naturally, as

shoots are in flower these younger growths will have reached a considerable height.

After flowering, every encouragement should be afforded the new wood, and it is a good policy to remove the flowering growths immediately they have ceased blooming, unless an autumn crop of bloom is anticipated. This would be possible from some kinds, but with others there would be little hope of a second blooming; consequently the growths are best removed. The new growths will often be crowned with bloom, and will succeed those from the pegged-down shoots, but should they appear blind then, it is a good plan to stop them early in September, an operation that ensures the well ripening of the wood. Supposing new growths do not start very early (and this sometimes is the case), then I would advise the retention of the pegged-down growths for



Rose Ulrich Brunner pegged down.

soon as the upward flow of the sap is checked, the eyes or buds upon the shoot commence to swell and eventually break out into growth, perhaps to be crippled by frost, which results in malformed and green-centred blooms. Therefore in districts where danger is feared from these late frosts do not be in a hurry to peg down the Roses. While all Roses require liberal supplies of liquid manure during the growing season (and even in winter it is beneficial), those pegged down can do with a larger amount, not only to support the quantities of breaking growths, but also to assist the new wood from the base. The very fact of bending down the long shoots compels some strong eyes at the base (that perhaps would under ordinary conditions lie dormant for some time) to start into growth, and by the time the pegged-down

use in the second year. If the plants are in a really good Rose soil, well cared for, and budded upon the Brier stock or on their own roots, there will be very few cases where the flowering shoots may not be removed after they have borne their blossoms. Roses for pegging down need a lot of room. I consider 4 feet apart none too much, and in order to fill up the apparent waste of space it is a good plan to intersperse some dwarf standards of the same or different kinds. This has the effect of filling up and also relieves what might appear a rather formal mass of Roses. Again, many kinds such as Gloire de Dijon, Grace Darling, &c., are a great success if partially pegged; that is to say, one or two growths are bent down and the remainder allowed to remain in the usual manner. This is a very commendable style,

for it frees the plant of undue crowding and a much larger quantity of blossom is obtained. Many people have found the Penzance Briers splendid for pegging down, or rather for forming low hedges. By the aid of some galvanised wire and a few uprights here and there, these lovely Roscs of such delightful tints and with deliciously scented foliage may be formed into a hedge anywhere from 1 foot to 3 feet in height and as much through. When established three or four years such hedges will be telling features in the garden during the early days of June. Again, many of the old-fashioned Roses growing in borders or in front of shrubberies may be rendered much more attractive if the growths are pegged down or even layered. By thus layering them, one plant will become surrounded by a quantity of smaller plants, all of them flowering most profusely, induced by the pegging down. I have seen such beautiful old kinds as Mme. Hardy, common Moss, de Meaux, Spong, Copper Austrian, Harrisoni, Coupe d'Hebe, Rosa Mundi, Celestial, and a host of others a perfect blaze of bloom when grown on this system. Many Roses may be caused to flower in this way where other treatment has failed. Of course, one would never think of pegging down Roses of the type of Baroness Rothschild, Mrs. W. J. Grant, Etienne Levet, &c. P.

Pillar Roscs.—I can strongly recommend Mme. Alfred Carrière and Gloire Lyonnaise to "B." as good pillar Roscs which bloom freely in the autumn. From the former I have cut good blooms even in November. The blooms grow on nice long shoots, and are very valuable for cutting on that account. Mme. Alfred Carrière is a strong-growing white Rose, with a pale pink flush, and Gloire Lyonnaise white, with a lemon-coloured tinge.—B. A. THORNYCROFT.

Rose Violoniste Emile Leveque.—Many of the later additions to the rapidly increasing tribe of Hybrid Teas have peculiar and attractive yellow and orange shadings. In this case the centre of the flower is flamed with orange quite as intensely as in a very pretty, but little-known Rose, Madeleine d'Aoust. It has also the same rosy flesh colour of many of the Hybrid Teas. It is a good grower. The flowers, though not large, are freely produced. This variety, together with Mme. Eugène Boullet, appeared in the same year, and it was thought both kinds were not wanted. But further acquaintance with them has disclosed the fact of their perfect distinctness, and I look upon the two Roscs as being promising.—P.

Rose Climbing Kaiserin Augusta Victoria.—This is a great acquisition. When one considers the usefulness of the dwarf form, the full value of this vigorous sport will be apparent. It will make growths from 5 feet to 6 feet long in a season, and thus would quickly cover a wall or roof of a greenhouse. It is remarkable that we have extra vigorous sports of recent novelties like the above, whereas we had to wait years for the same occurrence with kinds such as Niphetos, Davoniensis, Perle des Jardins, and Meteor. Apart from the value of these extra vigorous sports for the greenhouse or conservatory, I welcome them for the glorious heads they make upon standards. It is well known that Climbing Niphetos is the best form of this grand Rose for outdoor culture upon a standard, and I suspect it will be the same with the Rose under notice.—P.

Rose Xavier Olibo.—This excellent Hybrid Perpetual has been very beautiful lately, no variety of this tribe save Victor Hugo being more rich in colour, which is a dark velvety crimson. Unfortunately, it is rather a poor grower and requires renewing frequently. No amount of extra trouble, however, is too great in order to have this superb Rose in perfection. Many of these poor growers are best budded upon the Brier, either seedling or cutting, and allowed to

remain where budded. I believe this is the only successful plan to adopt in order to retain the plants in a fairly vigorous condition beyond the first year. It would even be worth the extra trouble to bud a dozen or so of this fine Rose each season, for I consider it one of the best darks, and it certainly is the freest bloomer. This, one would naturally expect, knowing the Rose to be a descendant of General Jacqueminot. It was introduced by Lacharme in 1864.—P.

ROSES MOST POPULAR AT THE CRYSTAL PALACE SHOW.

THIS season has proved the futility of exhibitors depending too much upon maiden plants for their blooms, at least for the early shows of which the Crystal Palace is the chief. I believe the majority of the flowers in the champion stands were from cut-backs. Some years this is just the reverse, most of them coming from maiden or one-year-old plants. This probably accounts for the paucity of many first-rate Roscs, such as the rich crimsons of the Horace Vernet type, which are always best as maidens. Indeed, I do not remember a season when what one may term the popular Roscs were so badly shown. One could not meet with a La France worth looking at, and Marie Baumann, the queen of red show Roscs, was almost entirely absent, only about twenty-nine flowers being staged in the whole exhibition. I think every amateur exhibitor should grow a certain number of maiden plants every year, more especially of kinds only good in that form, but this year's experience will prove to him that it will not do to curtail the number of cut-backs. Taking the forty-two most popular Hybrid Perpetuals and Hybrid Teas exhibited, Mrs. John Laing heads the list again with a total of some 370 blooms. There is a big drop from this quantity to the next three favourites, namely, A. K. Williams, Caroline Testout, and Ulrich Brunner, there being only about 140 to 170 blooms of each shown. It is very gratifying to find that the last named still maintains its position, for unquestionably it is one of the best red Roscs for the garden, and it seems to be difficult to beat as an exhibition kind. According to numbers shown, the following seven varieties take precedence in the order given, from 100 to 150 specimens of each being staged: Margaret Dickson, Mrs. R. G. Sharman Crawford, Mrs. W. J. Grant, Kaiserin Augusta Victoria, Mme. Gabriel Luizet, Marquise Litta, and Her Majesty. As Great Britain is generally well represented at this National Rose show (although the northern growers were not very strong on this occasion), the above numbers sufficiently demonstrate that the kinds named are very popular all over the country. The following seven indicate somewhat the character of the season by their diminished numbers: Gustave Piganeau, 86; La France, 86; Captain Hayward, 67; Suzanne Marie Rodocanachi, 64; General Jacqueminot, 56; Charles Lefebvre, 52; François Michelon, 50. Of the remaining twenty-two varieties, from thirty to forty blooms of each of the following were staged, namely, White Lady, Dupuy Jamain, Tom Wood, Earl of Dufferin, Marchioness of Londonderry, Helen Keller, Alfred Colomb, Etienne Levet, Marchioness of Downshire, and from twenty to thirty of the undermentioned: Marchioness of Dufferin, Mrs. Paul, Bessie Brown, Heinrich Schultheis, Marie Baumann, Prince Arthur, Lady Mary Fitzwilliam, Camille Bernardin, Horace Vernet, Countess of Oxford, Victor Hugo, Pride of Waltham, Abel Carrière, Louis van Houtte. There were some 140 other kinds exhibited among the Hybrid Perpetuals and Hybrid Teas, but in lesser numbers than twenty of each; indeed, in the case of some few of them only one specimen could be seen in the show. The Teas on this occasion were very good, although I have seen them much finer and of greater substance. I was quite prepared to find the flowers rather flimsy, but generally speaking this was not the case. From an exhibitor's point of view, the twenty-four varieties enumerated below are the most reliable. There are

two or three recent novelties that must speedily take a high place in this section, but this article is more concerned with kinds that were actually exhibited in quantity. The Bride has this year surpassed its parent in numbers shown, the respective numbers being 160 and 113. I believe it will not long retain this proud position, for, unless I am very much deceived, White Maman Cochet will rank first favourite. From 100 to 120 of each of the under-mentioned were exhibited, exclusive of any shown in bunches as garden Roscs: Maréchal Niel, Comtesse de Nadaillac, Mme. de Watteville, Mme. Hoste, Souv. de S. A. Prince, and Maman Cochet. Of such old favourites as Hon. Edith Gifford there were 97 specimens; of Innocente Pirola, 88; Mme. Cusin, 86; Cleopatra, 66; Souvenir d'un Ami, 65; Souvenir d'Elise Vardon, 61; Bridesmaid, 55; Medea, 53; Caroline Kuster, 48; Niphetos, 41; Golden Gate, 30; Ernest Metz, 30; Princess of Wales, 28; Muriel Graham, 24; and Ethel Brownlow, 21. Although it was rather late for the so-called garden Roscs, I was gratified to find such an excellent display. The style of putting up these Roscs has considerably improved during the last few years. I think all Roscs should be admitted into this class whether they are Hybrid Perpetuals or Monthlies. Any kind that is decorative and produces handsome trusses of blossom should be eligible, for I take it these classes are intended to demonstrate what kinds are most suitable for garden decoration, and surely Gloire de Margottin and the like are of that number. Taking the kinds most generally exhibited in bunches upon this occasion, W. A. Richardson comes out first with a total of fourteen, followed by Crimson Rambler with ten bunches. Eight bunches each of Rosa Mundi, l'Idéal, Ma Capucine, Reine Olga de Wurtemberg, Marquise de Salisbury, and Gustave Regis testified to their popularity, and Bardou Job, Mme. Falcot, and Mme. C. Guinois-seau were close behind with a total of seven each.

Of Macrantha and Mme. Pernet-Ducher six bunches each were staged, and five each of Polyantha grandiflora, Mme. L. Messimy, and Hebe's Lip. One would have expected to find more than four bunches of Camoens and common Moss, but it was not so. This number was also the total of each of the following: Crested Moss, Anna Marie de Montravel, Cecile Brunner, Perle d'Or, Claire Jacquier, The Garland, and Homère. It must be remembered that amateurs were restricted to not more than twelve bunches of these garden Roscs, which explains the reason why so few bunches were shown of what we look upon as some of our best garden varieties. Although the exhibits were first-rate numerically, there was certainly not half so many as there should be. I should like to see the competition as keen for these garden Roscs as it is for the trophy classes. Not more than three bunches, and in some cases only two, were seen of such lovely gems as Mme. Pierre Cochet, Blanche Moreau (Moss), Papa Gontier, Mme. Hoste, Rainbow, Souvenir de Catherine Guillot, Alister Stella Gray, Paul's Single White Gloire des Polyantha, Carmine Pillar, Marie van Houtte, Andersoni, Blanc Double de Courbet, Ma Surprise, Lucida plena, Mme. E. A. Nolte, &c. What appeared to me inexplicable was that not a single bunch was shown of Gloire de Dijon, Cramoisi Supérieur, Viscountess Folkestone, Grand Duc de Luxembourg, Perle des Rouges, Armosa, Princesse de Sagan, Princess Bonnie, and only one bunch each of G. Nabonnand, Mme. E. Resal, Mme. P. Perny, Aglaia, Beauté Inconstante, and Mme. Abel Chateau. It cannot be said that it was too late for these, although this may account for the almost total absence of Blaire No. 2, Celestial, Austrian Copper, Austrian Yellow, and Little Gem. But there is this to be said of exhibiting: each individual brings what he has best at the time. If we had more competition then we should find more variety. As it is we must be content that these Roscs are advancing in popularity, knowing, as we do, that their culture will tend to increase rather than diminish the votaries of the queen of flowers.

PHILOMEL.

SOCIETIES AND EXHIBITIONS.

DAHLIAS AT THE CRYSTAL PALACE.

THE National Dahlia Society's exhibition was held at the Crystal Palace, Sydenham, on the 1st and 2nd inst. It was announced that the entries were more numerous than usual, but the hot, dry weather must have kept some exhibitors away, as there were many vacant spaces of tables which detracted from the effect of the exhibition as a whole. It is to be regretted that the authorities of the Crystal Palace do not provide more appropriate tables for an exhibition of cut flowers. They are much too broad for Carnations, Dahlias, or Roses; they are painted of a colour which by no means harmonises with the tints of the flowers, and they are not in the least degree draped, as they should be, with baize or some such material in order to hide the yawning nakedness below them; and then there is the added fact, which cannot be gainsaid, that the very loftiness of the building dwarfs cut flowers out of all proportion and minimises their effect. These impressions were brought home to many on Friday and Saturday last. If the public is to be attracted to flower shows, there should be some attempt at effective arrangements, and that is just what was missed at Sydenham. A general survey of the exhibition showed that the larger show and fancy Dahlias fell much below their ordinary average of quality. The blooms were generally undersized, wanting in depth, and defective in form. As long as the practice of exhibiting blooms of Dahlias in this way is maintained, the old standards of quality in the flowers must be observed; at the same time the judges on this occasion were bound to take into consideration the drawbacks of the season, the prolonged drought and the heated, dry atmosphere day and night. Mr. Chas. Turner, of Slough, usually a foremost exhibitor in these classes, could not compete in any one class, and he was not the only exhibitor who found himself in this predicament. But all who could exhibit did their best, and the exhibition on the whole answered expectations.

The Cactus type of Dahlia was advanced in bloom, through the very causes which militated against the show varieties; they bloomed earlier than usual and with considerable refinement of character. At every flower show at which we have seen Dahlias exhibited this season the Cactus types have been exhibited in excellent character. D. Juarezi, the Cactus Dahlia, and its earlier varieties were tall in growth and late in flowering. The present race, greatly improved and extended in several quarters, are dwarfer in growth, much earlier in blooming, much more free of bloom than some of their ancestors, and better adapted for garden decoration. Among the newer sorts, Britannia and Magnificent are deserving of special mention. The late-flowering, tall-growing, spare-blooming type is rapidly disappearing before improved forms. The very causes which assisted to present the Cactus varieties in such good form operated also in the case of the pretty pompon varieties. They have been shown generally in a small compact shape, even, and of excellent quality, and with the Cactus varieties they were seen to great advantage at the Crystal Palace. Their bushy growth of moderate height and their remarkable floriferousness constitute them invaluable border plants, while a dozen or two varieties could be named that are perfect in form and petal and varied in colour. The single Dahlias are a declining quantity. It is their fragile character which tells so much against them. Not a few of our best varieties are of tall, ungainly growth and by no means so free of bloom as might reasonably be expected. These are defects which time can remedy, but the fleeting character of the blooms is a property that is a part of the nature of the flower. The single Cactus varieties have not been given a place in the schedule of prizes of the National Dahlia Society, but they were exhibited at Brighton by Messrs. Cheal and Sons in very winsome character.

Taking the show Dahlias in the order of the schedule, there were four collections of sixty, dis-

tinued, and all had a prize. Mr. John Walker, nurseryman, Thame, who has been exhibiting finely all the season, was placed first, Mr. M. V. Seale, nurseryman, Sevenoaks, second, and Messrs. Campbell and Son, Blantyre, N.B., third. A few of the best blooms in Mr. Walker's stand were Harrison Weir, Vice-President, Diadem, Frank Pearce, T. S. Ware, David Johnson, William Powell, one of the finest yellow selfs; Maud Fellowes, Shirley Hibberd, J. Hickling, Rosamond, Virginal, Colonist, John Walker, the best white self; Duke of Fife, Mrs. Gladstone, the best light variety and very constant; James Vick, Victor, a fine dark variety, and J. C. Vaughan. The foregoing may be taken as representing the leading varieties in all the stands. Mr. Walker was also first with forty-eight blooms. The leading blooms here were the Rev. J. Goddard, R. T. Rawlings, Prince of Denmark, Dr. Keynes, a very distinct small-petalled variety; Diadem, W. Rawlings, Mrs. Gladstone, &c. Mr. Seale was again second, and Mr. S. Mortimer, Swiss Nursery, Farnham, Surrey, third. With thirty-six blooms, Mr. W. Treseder, nurseryman, Cardiff, was first, having in fine character such varieties as Pleasance, Willie Garratt, Eclipse, Mrs. Gladstone, Frank Pearce, Goldsmith, W. Powell, Duchess of Albany, J. T. West, Duchess of York, and Mrs. Morgan. Mr. George Humphries, nurseryman, Chippenham, was second, and Messrs. Keynes, Williams and Co., nurserymen, were third. With twenty-four blooms, Mr. George Humphries took the first prize, and in that for twelve blooms, Mr. J. R. Tranter, nurseryman, Henley-on-Thames, was first, and Messrs. J. Cheal and Son second. A class for twelve fancy Dahlias is still retained in the schedule of prizes. The fancy type includes all tipped as distinct from edged flowers and all striped and flaked varieties. The fancy Dahlias are shown in the preceding classes, but there is one class in which they alone can be exhibited. Mr. J. Walker was again first; his leading flowers were the Rev. J. B. M. Camm, S. Mortimer, Donovan, Matthew Campbell, Duchess of Albany, Frank Pearce, and Emin Pasha. Mr. Seale was second, and Mr. Mortimer third.

Next in the order of the schedule came the Cactus varieties, and stands of eighteen bunches, six blooms of each, made an imposing display. Mr. J. Stredwick, Silverhill, St. Leonards, had the first prize, showing generally in fine character, among them being Countess of Lonsdale, Viscountess Sherbrooke, Stella, Britannia, Mary Service, Emperor, Magnificent, Eclipse, pale sulphur-yellow, Keynes' White, Charles Woodbridge, W. T. Balding, &c. Messrs. J. Burrell and Co., nurserymen, Cambridge, were a close second. They had some highly promising new varieties in Elsie, Olive, Ibis, Whirlwind, Auburn, Imperator, also Britannia and others. Messrs. Keynes, Williams and Co. were third, also staging some excellent varieties. There were five competitors in this class. With twelve bunches Mr. S. Mortimer was first, having Mrs. J. Goddard, Magnificent, Starfish, Keynes' White, Ebony, Mary Service, Britannia and Lucius, all in good character. Mr. Seale was a good second, having distinct from the foregoing Island Queen, Charles Woodbridge and Fantasy. Mr. G. Humphries was a close third. A class for twenty-four blooms, shown on boards in the same way as the show Dahlias, brought several exhibits. Messrs. M. Campbell and Son were first and Mr. Seale second. Pompon Dahlias were shown in very fine character, small, even and very bright in colour. Mr. M. E. Seale was first with an excellent selection admirably staged, the leading varieties, Donovan, Ernest Harper, Red Indian, Capt. Bayton, Nerissa, Ganymede, Crimson Gem, Lilian Douglas, Cherub, Snowflake, Demon, Tommy Keith, Distinction, Emily Hopper, Phebe, &c. Messrs. J. Cheal and Sons were a very close second, having, in addition to the foregoing, Adrienne, Dr. Jim and Mars. Third, Messrs. Keynes, Williams and Co. With twelve bunches, Messrs. J. Burrell were first. They had Isabel, Mabel, Geo. Brinckmann, Bacchus, Eurydice, Distinction, &c. Second, Mr. J. Walker,

and third, Mr. Geo. Humphries, both with charming blossoms. Glorious bunches of single varieties were staged by Messrs. Cheal and Sons and Mr. Seale. The former gained the first prize with twenty-four bunches, having such fine varieties as Columbus, Damon, Violet Forbes, Miss Roberts, Puck, Louissette, Polly Eccles, Leslie Seale, &c. Mr. Seale was second. As 240 blossoms had to be staged in each collection, the task of exhibiting was by no means an easy one. Mr. J. Walker, though the only exhibitor, was awarded the first prize for twelve bunches, showing in good form such leading varieties as Beauty's Eye, Eclipse, Leslie Seale, Miss Roberts, Victoria, Polly Eccles, &c.

Next followed eighteen classes for the amateur members of the society. Of show Dahlias, the best twenty-four blooms came from Mr. F. W. Fellowes, Putteridge Park, Luton. This included some promising seedlings, such as Bella, lilac; Prince Ranji, dark; Lilian Mary, flesh colour, suffused with pink; Tim, Kits, &c. Mr. T. Anstiss, Brill, was second. With eighteen blooms the best came from Mr. Thos. Jones, Ruabon. Mr. R. C. West, Salisbury, was second. There were classes for twelve blooms and six blooms also. The best twelve fancy Dahlias were shown by Mr. West, and included Peacock, one of the most distinct; Dazzler, Goldsmith, Mrs. J. Downie, Duchess of Albany, Matthew Campbell, &c. Mr. F. W. Fellowes was second. Mr. R. Burgin, St. Neots, had the best six varieties. Cactus Dahlias were shown by amateurs in twelve bunches of six blooms each. Mr. R. Keeble, Twyford, was placed first with very good examples of Alfred Vasey, Stella, Lady Penzance, Fantasy, Charles Woodbridge, Mary Service, &c. Mr. James Hudson, Gunnersbury House, Acton, was second. With nine bunches, Mr. H. A. Needs, Horsell, Woking, came in first, showing in very fine character. Mr. Jas. Bryant, Salisbury, was second. Mr. E. Mawley, the treasurer of the society, was first with six bunches, and Mr. Bryant again second. In a class for six bunches, the prizes offered by Messrs. Cheal and Sons, Mr. Keeble was first and Mr. J. Hudson second. Pompon varieties were shown by amateurs in two classes. The best twelve bunches, six blooms of each, were shown by Mr. J. Hudson, and Mr. W. Peters, St. Leonards, was second, in both cases unnamed and contrary to rule. Mr. R. Burgin had the best six bunches. Mr. Hudson was first in the six bunches of single varieties, ten blooms of each, and Mr. W. Mist second, in both cases unnamed. With six varieties, six blooms of each, Mr. E. Mawley, the only exhibitor, was placed first. He had charming blooms of Victoria, Damon, Northern Star, Polly Eccles, Beauty's Eye, and Miss Roberts. Two classes, one for six show and fancy Dahlias and one for six bunches of Cactus varieties, were set apart for those who had never won a prize at a previous exhibition of the society, and there was a very good competition. It is an excellent arrangement, as it brings in new growers and exhibitors. The classes for six blooms of any one type or colour of show Dahlia are always interesting. The best dark Dahlia was Prince of Denmark, from Mr. Seale. Mr. Walker was second with the same. The best light was Mrs. Gladstone, from Mr. Walker. Mr. West was second with the same. The best yellow was William Powell, also from Mr. Walker. Messrs. Cheal and Sons were second with Mabel Stanton. The best red or crimson was Duke of Fife, from Mr. West, Mr. Mortimer coming second with Arthur Rawlings. The best white was John Walker, from Mr. Walker, shown very finely. Mr. Mortimer was second with the same. Mr. Seale had the best flower of any other colour in Duchess of York, Mr. Mortimer coming second with Sunbeam. The best tipped Dahlia was Miss Brownie, from Mr. J. Walker, Mr. Mortimer taking the second prize with Peacock. The best striped was Prince Henry, also from Mr. Walker, Mr. Seale coming second with Mrs. J. Downie. The best edged flower was Miss Cannell, from Mr. Seale.

Special prizes were offered for eighteen varieties of fancy single Dahlias, the flowers to be tipped, striped, or edged. Mr. Seale was first, having excellent illustrations of Dorothy Seale, Jeanette, May Sharp, Phyllis, Miss Glasscock, Trilby, The Sirdar, Duchess of Marlborough, Gaiety Girl, Folly, &c. Messrs. Cheal and Sons were second, they having Princess Petula, Muriel, Folly, Lord Rosebery, Shamrock, Flame, Daisy, Duchess of Marlborough, &c.

Floral decorations formed of Dahlias were shown in a few classes. Mr. J. F. Hudson was first with an epergne composed of Cactus, pompon, and single varieties, with appropriate foliage. Mr. R. Edwards was second. Mr. E. Mawley had the best vase of twelve blooms, showing a Cactus variety with foliage. Mr. H. A. Needs was second, also with a Cactus. Mr. R. Edwards was first with three vases of Cactus Dahlias, and Mr. J. F. Hudson second. Mr. W. Treseder, Cardiff, had the best shower bouquet of Cactus Dahlias, a very artistically arranged one. Mr. Seale was second. Mr. Treseder was also first with a floral design, staging a harp formed of white and red Cactus Dahlias and white pompons. Mr. Seale was second with a cross of white pompons, with foliage at the base.

As many seedling Dahlias were staged, some notes of these shall be given next week. Mr. J. Green, nurseryman, Dereham, had a tastefully arranged collection of Dahlias, including a large and striking bright crimson variety named Red Rover; Zephyr, soft pinkish-rose; Green's White, a very fine new white. Messrs. H. Cannell and Sons, nurserymen, Swanley, had some 200 bunches of Cactus varieties arranged on a long table, among them some new decorative forms. Mr. T. S. Ware (Ltd.), Tottenham, had a large collection of Cactus and other Dahlias in great variety. Messrs. J. Laing and Sons, Stanstead Nurseries, Forest Hill, had two large tables filled with plants of various kinds, including Caladiums and other showy foliaged subjects, hardy flowers, Dahlias, &c., and also a ground group of various hardy ornamental plants, and Messrs. J. Peed and Sons, Roupell Nurseries, Lower Norwood, Dahlias and various other flowers.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, September 12, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. At 3 o'clock a lecture on "Lessons from the great drought of 1898" will be given by Mr. E. Mawley.

NOTES OF THE WEEK.

Arundo conspicua.—Very probably this plant, if lacking the finer plumes of the better-known Pampas Grass, would prove the better kind in not a few of the colder parts of Britain where the Pampas for various reasons does not thrive. Both plants require a good deal of moisture to grow them to perfection in a season such as this, and, indeed, at ordinary times a good soaking of moisture is not lost upon them.

Verbena Ellen Willmott.—This is, perhaps, one of the finest of the modern bedding kinds that has been introduced for a long period. It deserves this appreciative mark in more than one way, for its truss of pink blossoms shows extremely well against a margin of green grass, and when bedded on the lawn, and given more freedom and less of the rigid pegging that so severely crippled these things for years, it is an extremely fine plant. We are reminded of its excellence by the free manner in which it is used at Gunnersbury House, where Mr. Hudson has it in fine condition.

Yucca filamentosa.—This still remains the best of the Yuccas if we are to take as our standard hardiness, freedom of flowering, and usefulness. Its freedom of blooming is one of its marked characteristics in most gardens, and one can find few people who cannot admire its spikes of white bell-like flowers. It is not a rare plant, and is, indeed, absent from few of the best gardens, but on the other hand it is as yet unknown to many owners of small gardens, which would

gain much from the inclusion of this Yucca among the flowers they contain. As a foliage and flowering plant it has much in its favour.—S. A.

Pershire Plums.—Having some time since read in THE GARDEN a note about Pershire Plums in which the writer was anxious to know the experience of those who had planted these Plum trees out of Worcestershire, I write to say in 1896 I planted four young Pershire Plum trees in my garden near Bembridge, Isle of Wight, and both last year and again this year I have had a very good crop on these young trees. One is a bush and the others standards. This seems to show that Pershire Plum trees will fruit in other counties besides Worcestershire. The fruit is most excellent if cooked when green, but if allowed to become quite ripe loses flavour and becomes rather woolly—at least that is my experience here.—B. A. THORNYCROFT.

Lilium speciosum Melpomene.—No variety of *L. speciosum* is finer in general effect than this, the rich crimson-scarlet with which the flowers are crowned rendering the plant always conspicuous even if grown singly. Still finer then will they appear when whole beds are filled with the variety in question, for then we get an effect well-nigh unique, and with the richly-coloured flowers the massive, thick and heavy leafage is wonderfully consistent, giving the entire plant that touch of superiority that doubtless belongs to it by nature. And when these qualities blend in one kind, as in this case, the material effect is one that cannot be passed by even by the most casual observer. To the Lily grower this beautiful form has always been a great and decided attraction.

Acalypha hispida (Sanderi).—This has proved a fine decorative subject. Most frequently it has been presented at exhibitions in the erect form, without much pinching or stopping save in a few bush-like plants seen at the meetings of the Royal Horticultural Society. At Gunnersbury House, however, Mr. Hudson is trying it as a standard with a large degree of success. The plants are not of the regulation 3 feet or so given to standard Roses, but are nearer 5 feet high, some possibly a good deal more. At this increased height such things will be invaluable for indoor decoration. Pinched at first rather closely, but less so with each succeeding break, a good head has been formed, and the crimson inflorescence drooping at various heights will assist the effect materially when arranged among other plants.

Campanula pyramidalis.—Very few of the Campanulas can equal well-grown plants of the Chimney variety for its profusion of flowering. Plants of the old typical pyramidalis have been flowering for weeks in the open border with but little attention. The white variety has been better where it has come within reach of the garden hose pipe occasionally, for here the plants have been very effective in ordinary soil and with equally ordinary culture. A mixed bed, say a dozen feet across, of the blue and white forms of this Campanula with a few small or medium-sized plants of *Humea elegans* interspersed is distinctly effective. The effect of these grouped in the greenhouse is not unknown, yet there is little doubt if transferred to the open garden the same thing would create a surprise.

Kniphofia Nelsoni.—This is one of the finest of garden plants from a variety of standpoints. Many varieties, and some of the new ones among this number, are not devoid of a certain clumsiness, so short and so blunt is the inflorescence, but it is not so with Nelson's Torch Lily, which is the happy medium between short and tall, thick and thin, and very profuse. Indeed, so light in appearance is this kind, that it may be justly called an elegant plant, and the graceful foliage is equally deserving a similar mark of approval. Its bright colour too will find it many admirers, and as it flowers on into the autumn months it will be welcome in those gardens that are bedded out largely with such things as Michaelmas Daisies and Sunflowers. Anyone requiring a good free-flowering Torch Lily in large garden or small will make no mistake in selecting this

kind if good colour and freedom are points of importance.

Galtonia candicans.—The Galtonia is one of the noblest of our autumn blooming bulbous plants. When well grown its exquisite effect can hardly be equalled at the season in which it blooms. This year, probably on account of the prevailing drought, it has in many gardens been hardly so fine as in former years. Its growth has been less free and its flowers smaller than its wont so that it has not been seen to the best advantage. I have been in the habit of considering it a perfectly hardy plant, but of late years I have occasionally come across it in gardens where it is unreliable if left in the ground all winter. This is in those gardens a defect which tells against the Galtonia and prevents it from finding its way into some others. It appears that the name of *Hyacinthus candicans* is that by which it is more frequently met with than the authoritative one of *Galtonia*.—S. A.

Chelone obliqua.—There are a good many admirers of the Turtle-head among the ranks of growers of hardy flowers, yet it has an almost equal number of despisers, by which is meant those who think little of it as a garden flower. Yet it is often seen on good exhibition stands, though when it is bunched, as often shown, its distinctive characters are not so well seen as when it is growing in the garden. As much may be said of the so-called white form known as *C. obliqua alba*. It is not really white, but has a considerable addition of the crimson or purple, which is the colour of the type. The shade of the ordinary coloured form varies considerably. Some plants are brighter than others. This may either be due to the soil in which they are grown or to there being some variation from seeds. The *Chelone* is most at home and is longer-lived on a good soil than a poor, dry one.—S. ARNOTT.

Helianthus rigidus semi-plenus.—This is not a new variety of the well-known *Helianthus rigidus*, yet grown in many gardens as *Harpalum rigidum*. It is, however, not very generally known, and the other day a grower of long experience, who had it in bloom, asked the writer if he had ever seen it. Although not at present grown here, it was in my garden for several years, and was admired while it was grown, and preferred to the type. It grows a little taller and blooms rather later than the latter. The flowers are semi-double, and come in well for cutting if the stems are not left too long and the flowers are not too fully expanded to stand long in good condition. Its great fault is that of *H. rigidus* and some other perennial sunflowers—rapid increase at the root and an inveterate tendency to monopolise too much space to the destruction of neighbouring flowers.—S. ARNOTT.

Helenium striatum.—One is not disposed to enter upon the question of the true name of this plant, which is considered by good authorities to be *H. nudiflorum*. It was introduced as *H. grandicephalum striatum*, but has also been named *H. autumnale striatum*. My motive in writing this note at present is that those who may see poorly coloured specimens this season may not be thereby led to think that these show the plant under its proper aspect. In my light soil the flowers are small on account of the long drought, but the colouring is much brighter than any I have seen of late, with the exception of one plant in another garden. I am rather sorry that this *Helenium* has been represented in some nurserymen's and other exhibits at shows by flowers in which there was so little crimson that they were only made less beautiful than those of *H. autumnale*, and were poor substitutes for the high-coloured flowers of *H. striatum* when at its best. Those here have at present the almost fiery-red colour one sees in some of the Gaillardias.—S. ARNOTT, Carsethorn, by Dumfries, N. B.

Linaria vulgaris var. Paloria.—Apart from the interest it possesses from a purely botanical standpoint, because of its being, we have been told, an attempt of an irregular flower to become a regular one, the Pelorial Toadflax is

a flower worth growing. Its singularity of form, coupled with its soft yellow colour, leads it to be observed by many. I was reminded that a note upon it might be useful by having several inquiries addressed to me at a recent show as to what flower it was. A good bunch of this Toadflax was included in a prize stand of herbaceous plants shown by an experienced competitor, and a number of people who, one would have thought, ought to have known its name did not. This leads us to think that it is rarer than we had expected, or, at least, not so generally cultivated as a plant so readily increased ought to be. Like the type, the common Toadflax, the Pelorial variety runs freely at the root and requires to be kept within bounds. It is quaint and almost grotesque in its form, but has been found useful as a cut flower as well as in the garden.—S. ARNOTT.

Notes from Baden-Baden.—From Dr. Hans Meyer, of Leipzig, the famous conqueror of Mount Kibo, I got seeds of three new *Helichrysums* which look very promising; the leaves are covered by a silky white tomentum and the flower-heads, according to specimens at hand, consist of six to twelve big blooms of a shining white or pink colour in the way of H. Manni figured in *Botanical Magazine*. Thus far they have done very well, and as they are said to stand 14° F. on the Kilimanjaro, I will try to grow a portion outside for testing their hardiness. Among flowers I must mention (*Enothera formosa*, a splendid novelty, flowers freely produced and 3½ inches across, pure white; a fine plant for sunny rockwork. *Enothera Howardi* is about the same, but has sulphur-yellow, slightly smaller flowers. *Enothera Hartwegi*, having brilliant citron-yellow flowers, which are produced in large numbers, is also very attractive. *Liatris graminifolia* var. *dubia* is by far the best of the whole genus; the flower-stems rise to 6 feet, 2½ feet of which are beset with flowers of a deep bright and shining lilac.—MAX LEICHTLIN, *Baden-Baden*.

The Carton Sun Rose.—When I first visited Carton, some three or four years ago, I saw a very pretty double red *Helianthemum* called there the Carton double *Helianthemum*. This I have had the privilege of growing since, and yearly it grows in my estimation. It may exist elsewhere under another name; if so, I have not met with it. The Carton form is superior to other double red varieties, because of its long continuance in flower and of the way in which its fair-sized double blooms are displayed to view. One does not expect to find in a double Sun Rose the lightness and free-blooming properties of the single forms, which are so exquisitely beautiful on a sunny morning in early summer. The single Sun Roses are, however, as is well known, so fugacious that the flowers shed their petals in a few hours at the most. Some of the double forms have the bad habit of producing their flowers on such weak stalks that they hang down, and the bloom cannot be properly seen unless lifted with the hand. This is a fatal objection to a plant such as the *Helianthemum*, which ought to give a good display observed of all. The Carton double Sun Rose shows its flowers well up and blooms for months in succession. If it has a fault, it arises from its want of compactness, but for bold rockwork this can scarcely be considered a disadvantage.—S. ARNOTT, *Cursethorn, by Dumfries, N.B.*

Chrysanthemums—standing the pots on grass.—In a scorching summer like the present the advantage of having a cool bottom for pot Chrysanthemums is apparent. I saw some fine plants lately at The Pines, Woking, growing in a meadow near the garden. The pots were placed upon boards in the first instance to keep the drainage perfect, and the grass has been allowed to grow among them; thus a permanent shading is provided. It is next to impossible in my case, for example, to keep the foliage perfectly green and healthy from bottom to top of the plants when the sun beats straight on to the pots in an open position on exceptionally dry soil. I do not, however, grow for show blooms, as the plants noted

are, or one might look upon them with an envious eye, so fine are they. It will indeed not be risky to predict that later on flowers will be produced so fine in development that they will reach a high position at exhibitions where they may be placed. With the pots naturally shaded watering is more easy, and where the convenience exists it would certainly be wise to use meadows or the like another year. Shading the pots with boards is a plan I have somewhere seen recommended. This seems clumsy and unsightly—something akin to placing inverted flower-pots on sticks among Dahlias to trap earwigs, a system I could never adopt.—H. S.

NOTES FROM SHIPLEY HALL.

The fine collection of Hollies in the pleasure grounds at Shipley Hall, Derby, the seat of Mr. E. M. Mundy, is undoubtedly the feature of the place. Most of the plants are very large specimens, but so perfectly grown that the lower boughs are close on the lawn, and Hollies of large size have a very fine appearance when so nicely feathered. The collection includes all the better known green and variegated kinds, and the latter when grown to such noble proportions as at Shipley are most striking and handsome, quite putting in the shade such variegated things as *Retinosporas* and other conifers. The showy *Ilex Shepherdii* is one of the best, the large, handsome deep green leaves showing up very distinctly, and when it has grown to a similar size, the beautiful *I. Mundyana* will be even better. Some of the smaller leaved kinds of the *crenata* and *myrtifolia* type were noted, and it is surprising that these compact, low-growing evergreen shrubs are not more grown. The distinct habit characteristic of each species is well shown, as the plants are all a good distance apart and not crowded, as is so frequently seen. The magnificent collection of *Anthuriums* is worth going a long way to see, for not only are the plants splendidly grown, but the varieties are exceptionally good. Most of them are of the *A. Scherzerianum* type, *A. S. Shipley Hall* variety being a magnificent form, with immense brightly coloured spathes and the plants over 6 feet across. In the same house there are some lovely plants of a form of *Nephrolepis exaltata*, the long fronds drooping from the large baskets in which they are grown to the length of a couple of yards or so. In this way it is an extremely fine Fern for large houses. Inside fruit was getting over at the time of my visit, but a large quantity of Peaches, *Madresfield Court*, *Muscot* of Alexandria and other Grapes was hanging, and I also noted some beautifully-shaped, well-finished bunches of *Gros Maroc*. Orchids are rather largely and very well grown, but naturally the amount of flower open just now is somewhat meagre. The hybrid Water Lilies are healthy and flowering freely in all the best forms, but the plants are growing in round tubs, and have not therefore the natural and pretty appearance that plants have when growing in natural water. An artificial pond is about to be made, and when this is completed and the edges planted with Irises and other plants, it should prove a delightful feature in these fine gardens. A pretty arrangement of Maiden's Wreath and a few other white flowers with small Ferns was noted in one of the corridors, and further on some fine specimens of *Cymbidium Lowianum* planted in a rockwork with Ferns were doing well. Good crops in all the departments in the kitchen garden were noticed, some grand rows of that useful Pea Autocrat being especially good. The soil is heavy and unkind, but does not appear to crack badly with the heat, though rain is badly wanted by the green crops. H. R.

Lock and ferry cottage gardens.—Prizes have this year been offered by the Thames Conservators to their lock-keepers and ferrymen for the best-kept gardens and floral displays at the lock and ferry cottages. For the purposes of the award the river is divided into five sections, with four prizes in each section. The judging duties

are carried out by a specially-appointed committee. The awards in the two upper sections have just been made known. In Section I. (above Oxford), J. Iles, Shifford Lock, takes first prize; W. Curtis, Pinkhill Lock, second; and F. Havell, Grafton Lock, third. In Section II. (Oxford to Basildon) the prize-winners are G. Yeates, Goring Lock, first; W. Butt, Cleve Lock, second; and J. Bossom, Clifton Lock, third.

The weather in West Herts.—Another very warm week and the ninth in succession. On the 5th the shade temperature rose to 86°, which is the highest reading I have yet recorded here in September with the exception of two days in the same month last year, when the mercury rose to 88° and 90° respectively. On that day the black bulb solar radiation thermometer exceeded 134°, which is the highest reading registered by this thermometer in any previous September except that of 1890. The ground is still remarkably warm for the time of year, the temperature at 2 feet deep being about 6°, and that at 1 foot deep 7°, warmer than is seasonable. Rain fell on four days, but to the aggregate depth of but little more than a quarter of an inch. The past month proved a very exceptional one in many respects. Taken as a whole, it was the warmest August of which I have here any record (fourteen years). On eleven days the shade temperature exceeded 80°, and on two of these rose to 87°. The heat received from the sun as shown by the black bulb solar radiation thermometer was greater than in any previous August during the same fourteen years, the mean maximum reading for the whole month being 125°. The mean temperature of the soil at 2 feet deep was higher than in the warmest previous August by as much as 3°, and at 1 foot deep by nearly 4°. Rain fell on six days, or on a smaller number than in any August since 1880, and to the total depth of rather more than three-quarters of an inch, which is also the lowest fall during the same nineteen years, and about one-third of the average quantity for the month. The winds were the lightest yet experienced here in August, and for 480 hours, or twenty days, the direction was some easterly point of the compass. The atmosphere was not only calm, but also exceptionally dry. The sun shone on an average for nearly eight hours a day, or for a longer period than in any previous August.—E. M., *Berkhamsted*.

OBITUARY.

MR. ALFRED JOHNSON.

THIS well-known and widely-respected townsman of Boston, the managing director of the large firm of W. W. Johnson and Son, Ltd., seed growers and merchants of that city, died on the 3rd inst. at the age of fifty-nine years. He was a man of remarkable industry and energy, and in the course of his life had been largely instrumental in building up an extensive seed-growing industry in his native town. A few years ago, mainly for family reasons, the business was converted into a limited liability company, of which Mr. Johnson was the managing director until his death.

TRADE NOTE.

Messrs. Stevens and Co., Covent Garden.—We daily have evidence of the growing importance of the horticultural sales held in London, and we now learn that Mr. J. C. Stevens, of the old-established rooms at King Street, Covent Garden, has taken into partnership Mr. D. Pell-Smith, who has been for some years connected with Messrs. Jas. Veitch and Sons, Ltd., nurserymen, Chelsea.

Names of plants.—*X. Y. Z., Sussex*.—*Schubertia grandiflora*.—"Iris," *Bucks*.—You attach no numbers to your specimens, which gives us additional trouble in referring to them. The woolly-leaved plant is *Gnaphalium* sp. The other, send fuller specimen with buds that will expand.—*J. R. P.*—1, *Sedum Telephium Borderi*; 2, *S. spectabile*; 3, *S. quadrifidum*; 4, *Anthemis tinctoria*.—*G. S. S.*—*Tiger Lily*; *Tecoma radicans*.

THE GARDEN.

No. 1452.—VOL. LVI.]

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INDEX.

(Illustrations in Italics.)

Orchids:—		Dahlias, Cactus 215	Pea Autocrat 222	Societies:—		Pansy White Beauty 231
Cœlogyne ocellata 213	Flower garden notes 216	Fuchsias in the flower garden .. 215	Tomatoes, early 222	Royal Horticultural Society .. 229	Pentstemons at Kirkconnel .. 232	Plants, Japanese, grouping .. 232
Cypripedium Parishii 213	Helenium autumnale super- .. 216			United H. B. P. Society .. 231	Primula floribunda Isabel- .. 232	lina 232
Dendrobium chrysanthum .. 213	Lilium candidum, lifting 218				Retinospora obtusa aurca .. 232	Cripps 232
Epidendrum falcatum 213	Marigold Silver King 218				Tritonia imperialis in Scot- .. 232	land 232
Lælia anceps 213	Narcissus cyclamineus major .. 217				Zauschneria californica splen- .. 231	dena 231
Masdevallia Backhousiana .. 213	Pinks, alpine 214					
Masdevallia Chimera 213	Sweet Pea novelties in .. 218					
Odontoglossum cordatum .. 213	America 218					
Vanda suavis 214	Tabernaemontanas and Eu- .. 218					
Vanda tricolor 214	phorbias planted out .. 218					
	Vallota purpurea 215					
Trees and Shrubs:—		Roses:—				
Trees and shrubs, flowering, .. 214		Rose Mmc. Eugène Rosal .. 219				
		Rose Souvenir de la Mal- .. 220				
		maison 220				
		Roses, some good China .. 219				
		Victor Verdier group, the .. 219				
Flower:—		Kitchen:—				
Arenaria and Cypripedium .. 217		Carrots 222				
Arenaria montana and Cypri- .. 217		Onions, storing 222				
pedium montanum in the .. 217		Onions, thinning autumn- .. 222				
rock garden, Kew 217		sown 222				
Begonias and dry weather .. 218						
Clumbers, flowering, in De- .. 216						
von 216						
Dahlia Mrs. Stephenson .. 218						
Clarke 218						
Dahlias at the Crystal Palace .. 217						

ORCHIDS.

CYPRIPEDIUM PARISHI.

THIS is a very beautiful plant, though not so large as some similar habited kinds, and I have never been able to understand why such a pretty thing has not become more popular. It comes nearer the South American section of the genus than most of the Asiatic species, and at first sight the flowers remind one somewhat of a gigantic *C. carolinum*. The stout spikes attain a height of about 18 inches and bear in some cases four to six flowers. Each one is about 3 inches across and the sepals are yellowish with green veins, the petals elongated and prettily undulated, greenish at the base with purple markings, the pouch similarly coloured. In habit *C. Parishii* is very vigorous, and the deep green leaves are striking and handsome even when the plants are not in flower. Its culture, therefore, is comparatively easy provided always that ample heat and atmospheric moisture are present in the house wherein it is grown. The compost may be made up of equal parts of peat, loam and chopped Sphagnum Moss, a few large lumps of charcoal and crocks being mixed with it to ensure aëration. The liking the roots have for charcoal is seen by the way they run through and over any chance lump that may be in the compost, and this material may be freely used. As to the manner of potting, there is no need to elevate the plants, as is usual with the majority of epiphytall Orchids. This *Cypripedium*, it is true, is usually found growing on trees, but nearly always, I believe, surrounded with vegetable matter.

The roots then may be allowed free play by giving moderately large pots, and the base of the growths may be a little below the rim of the pot. It is only in the case of established plants though, for newly-imported crowns always seem to relish being above ground, so to speak, and if the long green leaves are tied up to stakes set in the pot and a little lighter material brought up to their base, there will be no fear of damping either of the young growths, the roots or the base of the leaves. Single growths of *C. Parishii* often come away well and soon make nice healthy little plants, rooting

freely into the material named above and filling their pots. This is the class of plant that takes a lot of watering, the small amount of compost left after the roots have run all through it drying up very rapidly. Moisture is necessary all the year round, especially when dry, hot weather prevails. The flowers of *C. Parishii*, like those of several other *Cypripediums*, open during a dull season for Orchids, and are all the more valued on that account. They last well in perfect condition, and though, as mentioned above, the plants require ample heat to grow them well, they will not be much harmed by a week or two in a warm room or conservatory during the time they are in flower. A rather shady position in the East India house suits it well, or in a house where *Phalenopsis* thrives on the roof, this may be grown on the stage. *C. Parishii* was first discovered by the late Rev. C. S. Parish, who found it in Moulmein in 1859, but it was not generally grown until 1868, when plants of it were imported by Messrs. Low and Co.

Lælia anceps.—By far the finest grown plants of this Orchid that I have seen for a long time I noticed this week in Mr. Rider Haggard's collection at Ditchingham House, Norfolk. The pseudo-bulbs were immense, and each new growth had its spike—a very satisfactory state. The plants are large and growing in broad, flat baskets suspended from the roof in a light span-roofed house, where they must be exposed to a good deal of sun. This is undoubtedly what this useful winter-flowering plant delights in, ample light and not too much material about its roots.

—H. R.
Epidendrum falcatum.—Though not as free-flowering in many places as is desirable, this is a distinct-looking and interesting plant. It is easily known by the thick drooping foliage, which occurs rather widely apart on the creeping stems. The flowers are like a very large *Brassavola*, the plant, in fact, being sometimes labelled *B. Pescatorei*. The sepals and petals are narrow, brownish or greenish white, the lip yellow, with a long pointed centre lobe. It is a native of Mexico, and plants of it are now flowering at Ditchingham House. It should be suspended near the glass in a light, sunny house.

Cœlogyne ocellata.—This pretty plant I have noted in flower during the week, earlier

than I ever remember seeing it, as the flowers do not usually open for several months. It is a pretty Orchid that merits attention from its fine erect spikes of white flowers with yellow blotches on the lip. Coming from a considerable altitude at Sikkim, it does better in a cool intermediate temperature with ample air and a shady position than in the warmest house, and may be grown in baskets or pans. The compost may consist of equal parts of peat fibre, leaf-mould, and Sphagnum Moss, and the roots should never be dried.

—H.
Odontoglossum cordatum.—Though often flowering in early spring, the flowers of this plant seem more welcome now that the cool house is not so gay. The species is as variable as any, some forms being much superior to others. The plants are very free-flowering, the spikes arching and containing a large number of blossoms, the sepals and petals of which are a deep golden yellow, with blotches of chocolate; they are elongated, almost like those of a *Brassia*. The heart-shaped lip, from which the species takes its name, is white, with rose spots.

Masdevallia Chimera and M. Backhousiana.—These two plants are very much alike, so much so, that, distinct as they may be botanically, the ordinary observer sees little difference in them. Both are interesting and peculiar plants, the weird-looking flowers of which are produced in abundance now. Both are well in flower in Mr. Rider Haggard's collection at Ditchingham, where cool Orchids of most kinds do well. These kinds are found to do best with rather warmer treatment in winter than the majority of the genus, and should never, in fact, be in a house below 50° in winter. The plants at Ditchingham are very fine ones, in large baskets suspended from the roof.

Dendrobium chrysanthum.—I recently noted a magnificent specimen of this very pretty *Dendrobium*, the long pendent pseudo-bulbs hanging in profusion from a large basket and covered with flowers. These are a pretty tint of yellow with maroon centre and are produced all along the stems in bunches of four or five. A very fine display is thus secured, but, unfortunately, the blossoms are rather quickly over. *D. chrysanthum*, though strictly deciduous, flowers upon the young green wood, often before the leaf falls, and until this occurs the plants must not be much dried at the roots. A short resting season is then necessary, but the plant begins to grow away very soon after, often in the early part of winter, so that part of its growth has to be made during the

worst time of year. It is not wise to hurry h plants then, but just to keep them gently moving and in spring, with the increased light and advancing temperature, progress will be more rapid and satisfactory. This is when a little more warmth than usual may be allowed, the plant at other times doing best in an intermediate house. The compost should be very rough and open, as the roots of this species are much larger than those of the majority of species. Fairly large receptacles are also necessary.—H.

Vanda suavis and **V. tricolor**.—There is a good deal of confusion existing in the nomenclature of these two fine Orchids, and on several occasions recently amateur growers have asked me what is the difference. Structurally there is little, if any, but as garden plants they are distinct enough, *V. suavis* having in almost every case a pure glistening white ground, which makes it in my opinion a far more chaste and handsome Orchid than *V. tricolor*, which is usually some tint of yellow. There are, however, intermediate forms, and some of these are prettier than others, but none can come up to the better forms of *V. suavis*, one of the most noble of all Orchids. In the Ditchingham House collection both are doing remarkably well and flowering freely, the long white roots shooting out in all directions, showing how well the treatment they get suits them. Most of these plants, Mr. Haggard tells me, have been cut down and re-rooted within the past few seasons, yet they are flowering freely, showing plainly enough that the absurd plan of leaving the plants to get untidy and leggy for fear of cutting them down is not only absurd, but quite unnecessary.—H. R.

TREES AND SHRUBS.

FLOWERING TREES AND SHRUBS IN AUGUST.

ABUTILON VENILLARIUM against a wall has borne its arching wands studded at intervals with pendent crimson blossoms, from which the pale yellow corollas and brown stamens peep. **Aralia (Fatsia) japonica**, of which some immense specimens exist in the south-western counties, plants 8 feet or 10 feet in height and 16 feet or more in diameter being not unknown, has perfected its Ivy-like inflorescence, while tall examples of *A. spinosa* are crowned above the layers of their deeply-pinnate leaves with ivory-white plumes of blossom. In a sheltered garden *Cassia corymbosa* has expanded its golden flower-clusters, while *Catalpa bignonioides* has perfected its pyramids of bloom. During the month of August I passed through a village in East Devon in the main street of which some young trees of this *Catalpa* were in fine bloom. The Mexican Orange Flower (*Choisya ternata*) has here and there given a second crop of fragrant blossoms, and *Caryopteris mastacanthus*, which has grown into a fair-sized shrub, has been thickly set with its lavender flowers. *Ceanothus Gloire de Versailles* was in fine bloom early in the month, and in a southern exposure *Clethra arborea* has blossomed. *Cytisus arboreus* has also been in bloom, and the Holly-like *Desfontainea spinosa* has produced its scarlet and orange drooping tubular blossoms. *Escallonia macrantha* is in bloom in some places, and *E. montevidensis* is smothered in its white flower-clusters, whose sweetness is much appreciated by the insect world. On a sunny August day a large bush of this *Escallonia* presents an attractive sight, not alone on account of its floral beauty, but also by reason of the varied insect life that haunts its blossoms. Flies of many descriptions are there, while the air is murmurous with the subdued monotone of the hive and humble bees. Of the butterflies, the red admiral, its jetty wings barred with vermilion and spotted with white, is present in by far the greatest numbers, a dozen or more expanding and closing their brilliantly marked pinions on the ivory-white flower-heads at the same time being no uncommon sight. Now and again a pea-

cock butterfly displays its chestnut brown wings, each bearing in its centre the large many-hued circle from which it takes its name. Now a fritillary with orange-brown black-marbled wings sails slowly over the summit of the bush, or painted-lady or tortoiseshell, the latter's brightness tarnished by its summer-long volatile gaiety, poises lightly on the flowers, or the sober tints of meadow-brown or wood-argus meet the eye. Early in the month I noticed a *Beschorneria* bearing a red-stemmed flower-panicle some 4 feet in height. The *Habrothamnus* has been producing its deep crimson bloom-clusters throughout the month, and the Syrian Mallow, which shares with the common St. John's Wort the title Rose of Sharon, has flowered profusely. The most attractive variety of this shrub is *Hibiscus syriacus totus albus*, the flowers of which are of a snowy purity. The Sea Buckthorn (*Hippophae rhamnoides*) is adding another tint to the grey-green of its leaves as its clustering berries assume an orange hue, and *Lycasteria formosa* displays on its drooping racemes of maroon-purple bracts its whorls of white flowers. The great standard *Magnolia grandiflora* is blossoming with even more than its customary freedom, a dozen or more fragrant white chalice expanding with each succeeding day. For four months in the year this tree is never flowerless, and during the past two seasons of 1897 and 1898 its first bloom was cut in the second week of May and the last early in November, thus giving a flowering period of six months, while in 1894 on December 2, just previous to the severe weather that marked the opening months of 1895, I cut a large *Magnolia* bud which opened well indoors. The only year of the last seven that this tree did not flower satisfactorily was in 1895, when all the early buds were killed by the frost, the first flower of that year not expanding until the end of September. The tree in question is a fine specimen, sweeping the ground with its branches which have a spread of 35 feet, while in height it exceeds 20 feet, and has borne some hundreds of blossoms every year with the exception of 1895, when the number of blooms that expanded was limited to thirty-two. The Venetian Sumach (*Rhus Cotinus*) is now covered with the feathery clusters that succeed the inconspicuous flowers, the flossy plumes assuming lustrous tints of purple and metallic-brown, while the shrubby hybrid *Veronicas* are becoming purple and pink with bloom.

Torquay.

S. W. F.

FLOWER GARDEN.

ALPINE PINKS.

WE are in the habit of seeing all kinds of alpine Pinks called by all kinds of names, but it is quite true that a rock garden may display some very neat and ornamental kinds for which it is very difficult for a botanist to find a genuine name, because some of the species hybridise so readily and many of the hybrids are fertile, so that the progeny departs further from the type in every generation. Setting aside the cluster or bunch-bearing Pinks, there are hardly a dozen kinds in common cultivation which can be distinctly referred to a wild type, and can also be easily multiplied by cuttings or come generally true from seed in gardens. I am going to mention the best of these as I have grown them in Edge garden.

DIANTHUS ALPINUS.—Very good and bears seed sparingly, which comes true and flowers the first year and spreads to a large breadth the second year, after which it often dies or becomes patchy. It likes moist peat, and if the soil is well drained by nature, does as well on the flat border as the rockery.

D. GLACIALIS.—I mention this here because it is so well known to tourists as one of the flowers they see at the highest alpine elevations, but the type when cultivated does not make a good rock

plant. The leaves are too long and too dense in proportion to the flowers, and unless recently raised from seed collected wild the plant is seldom seen true in cultivation. The best of all rock Pinks, however, goes by the name in nurseries of *D. glacialis*. I cannot trace it further back than Robert Parker's Tooting nursery, from which I got it twenty-five years ago, and I believe the original plant is still alive with me. Backhouse, of York, has kept up the stock, and I believe still sells it as *D. glacialis*. It is the earliest of the rock Pinks, beginning to flower at the end of April. It is rather difficult to propagate, and though I have searched all my many plants annually I have never found a seed. In habit it is intermediate between *D. glacialis* and *D. alpinus*, perhaps a hybrid of these two, and is well worth any pains bestowed on it.

D. NEGLECTUS flowers all June. It bears dense and very acute leaves. The flowers are lighter in colour and rather larger than those of *D. alpinus*, and have the under side of the petals of a pale apricot colour. It is long-lived on the top of a rockery, growing in very little soil, but in deep, fine stone riddings, and spreads to 6 inches across, plants of that size often bearing from fifty to 100 flowers. It seeds pretty well, and seedlings are always with me true to type, though they vary in height, the best having stalks of 4 inches to 6 inches long. It is easy to cultivate if the roots can penetrate deep without encountering any stagnant moisture, but if they find their way into sodden soil the plant turns brown and dies the first winter.

D. CAESIUS is very different in habit from those already described, which do not assume a pendulous habit as this does, being never so happy as when growing in a wall or in the crack of a rock. The Cheddar Rocks, from which it takes its name, the walls of (I think it is) Magdalen College at Oxford, and several parts of the Alps have distinct varieties in size of flower and stature, and any favourite form must be propagated by cuttings, which is very easily done. Unlike *D. neglectus*, *D. caesius* hardly ever comes true from cultivated seed where other species are grown near it. It is often difficult to determine the pollen parents of its hybrids. Sometimes they seem to approach what is commonly called *D. plumarius*, having a dark eye like small single forms of the garden Pink. In others the grey of the leaves, which give its specific name, is entirely changed to dark green, and the flower is dark crimson—characters which I attribute to a cross with *D. deltoides*—but whatever their history, the crosses are often worth perpetuating.

D. ARENARIUS (of Linnæus) has a very good portrait in *Botanical Magazine*, 2038. The leaves and stalk, about 6 inches high, are small and slender for the size of the flower, which is more than an inch across, very deeply fringed, white, with an ill-defined brown eye, and very fragrant. It comes for the most part true from seed.

D. GALLICUS (of Persoon) is confused with the preceding, though quite unlike it, one of its synonyms being *arenarius*, a name it deserves by its habit of growing in pure sand. It is mentioned here because the name is far commoner than the true species, which has rather thick, solid leaves and a strong stem more than a foot high, and a fringed flower of uniform pale pink. There is an excellent portrait of it in Wooster's "Alpine Plants," tab. 40. It is mostly a maritime plant, being abundant in the warm sands on the coast near Biarritz, from which I have several times brought it home to cultivate. Though I have given it a warm situation and deep sand to grow in, it has always flowered very late, if at all, and has shown signs of tenderness, never ripening seeds.

D. DELTOIDES.—Nothing more need be said of this purely native species than that it seems contented with any situation and soil, that it is easily pulled up if its room is wanted for anything better, that it contributes its pollen to hybrids, though seldom producing them from its own seed, and that the white pink-eyed variety comes in a large proportion true from seed and is very pretty.

D. SYLVESTRIS is a good rock plant, though not long-lived. It produces seed freely and is easily raised; the leaves are long and drooping, and the stalks weak and incapable of holding up the large pale pink flowers. Though I raise it every year from seed saved in my garden, I do not know that it has ever produced a hybrid there. The flowers are not fringed, and are not unlike the type of *D. Caryophyllus*, but paler in colour.

D. CALLIZONUS, so well grown at Kew, the flower of which resembles a magnified *D. alpinus*, I have never been able to keep more than a year in spite of two or three trials.

D. FRAGRANS.—This species has a small indented flower on an upright stem 6 inches or 8 inches high. A pleasing character is its very strong fragrance of Jasmine. There is a double form of more robust habit than the type which belongs to this, though formerly distributed as *D. petraeus*. This form is very easily propagated, and is deservedly a favourite in alpine beds.

D. PETRÆUS resembles *D. fragrans* in stature and in its white indented flowers, which are rather larger. There are other botanical differences, but as the two species certainly mix with one another and with others in cultivation, those who wish for accurate definitions of them are referred to the *Botanical Magazine*, where there are portraits of both, or to the monograph of *Dianthus* in the *Journal of the Linnean Society*.

D. SUPERBUS.—This well-known and widespread species extends from near the North Cape to Spain and from the extreme west of Europe to Japan. It may be expected to vary much. The best-known type in Europe grows nearly 2 feet high, has large, much fringed flowers, recalling those of *Clarkia pulchella* in form and size, ranging in colour from pale lilac to white. The scent is strong, but hardly agreeable, and the duration of the plants seldom exceeds two or three years. It is mentioned here chiefly because it is even more prone to form hybrids than *D. cæsius*. Its hybrids become very tufty and spread into large breadths, and are much dwarfer in stature than the seed parent. They root so densely that they may generally be easily divided with a trowel, but are mostly of second-rate merit.

D. KNAPP is cultivated by me for its unique colour—clear pale yellow—not for any merit of habit. It is said to be either identical with or a variety of the older name, *D. liburnicus*. It has small clusters of small flowers on weak stalks 15 inches high which cannot bear up the flowers. If a dozen plants are planted together the flowers cover the ground pretty thickly and make a show. It ripens seed sparingly and comes quite true.

D. MASMENÆUS, named after a mountain in Cappadocia, and one of my best rock Pinks, flowering freely from a small base, with flowers nearly the colour of *D. deltoides*, but larger. I have had the species for twenty years. It was given to me by the late Mrs. Lloyd-Wynne, of Coed Coch, who told me she found it wild either in Sicily or Palestine, the latter country only being within the range of the species. For several generations it has always come quite constant from seed, so I became convinced that it was a true species, but I could not get a name for it until I sent a good specimen to the Herbarium Boissier at Geneva, from which it was returned with the above name.

Besides these I have grown many other species of alpine Pink, but they were either deficient in merit or of uncertain identification, and my experience of seed saved in my own garden and of bought seed and plants of this tribe convinces me that the names are seldom trustworthy.

C. WOLLEY-DOD.

Edge Hall, Malpas.

Fuchsias in the flower garden.—I think it was Mr. Molyneux who last autumn had a note on the fine Fuchsias he had seen in the neighbourhood of Cromer growing in the open air. Hereabouts showy spreading bushes are common in villa and cottage gardens. At the present time (the

first week in September) the plants are a mass of flower, and form a most pleasing contrast to the more formal subjects by which they are surrounded. The old Fuchsia Riccartoni is very graceful wherever seen in rude health, and flowers so freely, that the long growths are weighed down. Some of the larger flowered varieties are just as vigorous, and as they come into full beauty just when nights and mornings are getting cooler, they remain in that condition until spoilt by early frost. By this all the year-round exposure these hardy sorts become hardier still, though in winters of more than ordinary severity a covering of some short litter or leafy material is necessary; indeed, it is best given in November as a safeguard. Some of the cottagers cover the crowns with coal ashes.—J. C.

Vallota purpurea.—"J. G.'s" note on this showy old plant is opportune. Twenty years ago it was very generally met with, but one may now inspect many greenhouses without seeing it. Its value does not altogether lie in its brilliant colour, but in the period at which it comes into flower, being, as "J. G." says, at a season when pot plants in bloom are none too plentiful. The mixture named by "J. G." cannot be improved upon, good drainage also being very necessary, as it is not advisable to disturb the plants too often. At one time it used to be well shown in collections of stove and greenhouse plants in the north of England and it always made a mark. A number of bulbs were placed in a rather large pot and surface dressings given each year that potting was not performed. The plant is much benefited during growth by liberal supplies of weak liquid manure. Ripening is an important point, the foot of a sunny wall being a good position for a time after flowering.—J. C.

CACTUS DAHLIAS.

IN spite of the drought these are making a brave show. Too much cannot be said of them as beautiful garden plants. Few plants have been so quickly improved by the introduction of new varieties as have these, and kinds which but three years or so back were thought wonderful stand no chance against the latest types. In colour, lightness in arrangement of the florets, freedom of bloom, and in the general habit of the plant's growth changes for the better may be noted. They will undoubtedly oust the stiff, formal Dahlias out of cultivation. In some shades of colour we do not yet possess perfect sorts, notably in whites and yellows, but in time these will probably come. The best white is Keynes' White. This is in every respect, except that it has a creamy shade, a very fine variety. Free-flowering and constant, it throws its blooms well out of the leaves, while the leafage is ample, and the plant not over 4 feet high, a capital height for a Dahlia. Miss Webster and Salisbury White are sorts which bear the purest white blooms of any, but neither has the form now most esteemed. The last named is especially useful where a quantity of cut bloom is required. Mrs. A. Peart is uncertain, otherwise when good this is excellent. I find the flowers come better on old plants than on those raised each year from cuttings. Lady Penzance is the only yellow kind worth growing for a fine type of bloom. Its only fault is that the stems of the flowers are short, and they are thus somewhat hidden among the leaves. By well thinning the growths, especially those which spring from under the bloom-buds, this fault may be less noticeable. Blanche Keith is a good yellow, and so is Mrs. Turner. Both have heavy-looking blooms, but the plants are striking in the garden on account of their freedom in flowering. Daffodil, which was thought highly of when first exhibited, is not with me an improvement in yellows. The habit of the plant is certainly desirable, but unless severely thinned the blooms do not come full to the centre. A Cactus Dahlia that will only produce a very limited number of perfect blossoms is hardly worth troubling about. Delicata has blooms of a lovely shade of salmon-rose. Its flowers, however, are hidden among the

leaves. A much better kind of a similar shade is Loreley, a pretty kind, rose, shaded white to the centre. The blooms are well formed, borne freely on long stems, and the plant is about 3 feet high. Its foliage is very dark green. This sort will, I fancy, become popular. Arachne is the first of a fancy type of Cactus Dahlia. The ground colour is white, each petal being more or less striped with red. The stems are long and weak, so that the blooms become pendent. This, however, does not detract from the merits of the plant as a whole. The Clown is a newer kind, having flowers with distinct markings. In this case half of each petal is a buff shade, the other part white. The habit of the plant is sturdy. When better known this sort will be much admired. Starfish is quite the best of those with scarlet blooms. Every flower comes perfect and it is very free. The habit of the plant is somewhat loose and requires more tying than many of the improved sorts, otherwise no fault can possibly be found with it.

Standard-bearer has blooms less bright and not so well finished, but with a dwarf, close habit of growth. J. E. Frewer is a scarlet-coloured variety that must not be discarded yet. Gloriosa produces blooms most rich in the shade of red, but it is heavy looking as types go now. The plant, too, is rather tall. For planting in front of shrubs, it has, however, a bold look. Night has very dark maroon flowers, almost black, and is a first rate improvement. Matchless, so long favoured as a dark kind, is quite superseded by this. One of the most free to bloom and every flower perfect in form, it is a singularly handsome bush. Ranji, now grown for the first time, is disappointing, the flowers being so rough shaped and their centres faulty. It is dark-coloured and free blooming, that is all, but unless it gives better blooms in moist weather I shall discard it. Cinderella has blooms of a purple shade, deep and rich. The form is excellent, but the plant requires to be thinned, otherwise all the flowers do not come double. Earl of Pembroke is somewhat heavy in shape of flower, but for freedom of production and general habit of the plant it is quite the best of the plum-purple hue. Charles Woodbridge is, perhaps, the handsomest of Cactus Dahlias. It has blooms of a rich crimson colour, large and perfect in shape. It is less free in flowering than many, but withal a type one would like to see in other colours. Mrs. John Goddard has dazzling light maroon blooms of the most approved formation. It is free and takes a long time to open, but each flower also lasts a considerable time even when fully out. Beatrice bears flowers of a distinct rose-pink shade. The plant must not be thinned, or its blooms come coarse. It is a tall-habited kind. Island Queen resembles it somewhat in colour. This, on the other hand, must be well thinned. If this be not done its blooms are small. The first is a desirable garden plant; the other fit only for exhibition. Bridesmaid is a capital sort, so unlike any other in its combination of colours—primrose, shaded pink. The plant is very free-flowering and the blooms long-stemmed. It must not be thinned, or the petals are too numerous to properly open. Mrs. Wilson Noble is not the least charming of Dahlias. The salmon-pink blooms have a tint quite their own, and the shape is excellent. It is dwarf and very free; so much so, that the buds should be reduced considerably. Countess of Lonsdale is a new variety of great merit. In habit of growth the plant is first rate. The blooms are not wanting in any way, and are borne well out of the foliage. Its colour may be described as rosy salmon, very delicate and charming. Alfred Vasey has flowers of a salmon-red tint, and its spiky petals are formed in a perfect way. The plant is short and especially free flowering. A large bed of this kind alone would form a most striking object. Britannia, on account of its dwarf habit and free-blooming qualities, would make a splendid bedding Dahlia. The light buff blooms all come of capital form. Altogether it is one of the really improved types. Capstan has blossoms

of a terra-cotta-red shade of nice form. The plant is dwarf, bushy and free-flowering. This will become an esteemed kind. Mary Service is delightful in its many tints. Heliotrope and red would describe them. The blooms are of good shape and especially light, making it a desirable variety. Dwarf and free, it needs but little thinning and the blooms last well when cut. Fusilier, coral-red, is now well known as a very excellent variety. It is free, but in a year or two will probably be superseded by a sort lighter in formation of blossom. Lucius is a pretty type. The orange shade of colour is one wanted, and in all respects it is an improvement. Magnificent as yet I am not so pleased with. It may be that I have not thinned the blooms enough, for the centres are faulty. It is very free and dwarf, and if later flowers come better than the present ones the name will be thought deserving.

Harmony, Harry Stredwick, Miss A. Nightingale, Mrs. Barnes, Cycle, Mabel Keith, and Mrs. Kingsley Foster are worth growing perhaps, but are behind those kinds more fully described, which are now noted as they are in the growing state. At exhibitions many new kinds will doubtless be seen for the first time and much admired, but it is only after a trial in the garden that one can really judge of their merits. H. S.

FLOWER GARDEN NOTES.

DAFFODILS.—If existing breaks of Daffodils are to be strengthened or new plantings formed, it will soon be time to see about them. Given favourable conditions as to soil, they may be planted in almost any position except in extreme shade, but it is very little use attempting to naturalise the Daffodil in uncongenial soil, where, for instance, it is very light and sandy, unless special preparations can be made, which are naturally somewhat opposed to one's idea of *bond fide* naturalisation. Here with sand close to the surface and going to a great depth the result of planting in the turf is disappointing, but if a bit of old shrubbery is cleared away I can secure capital results by digging deeply, working in a compost consisting of one half road sidings and one half well decomposed leaf manure, and putting the bulbs well down. If an enduring display at each clump is a consideration, different varieties of the trumpet and star sections can be used.

DRY WEATHER ANNUALS.—It is interesting in a season like the present to note anything in the way of flowers that stands the prolonged drought fairly well, and that holds its foliage and continues to flower when other things have practically succumbed. From this standpoint there are few annuals better than the Sunflower known under the names of Stella, New Miniature, and one or two more that do not occur to me at present and which are not important, as they are practically the same thing. On a rather poor border and fully exposed to the sun, plants of this Sunflower have not gone so high as usual, but they are in the best of health and covered with the bright-coloured blooms, the black eye and the rich yellow of the petals forming an effective contrast. Another excellent dry-weather plant is *Cosmos bipinnatus* and its varieties, an annual with Fennel-like foliage and light graceful flowers. The latter look flimsy, but stand much longer, both on the plant and in a cut state, than their appearance would seem to indicate. A deeper and more pronounced shade of purple would be a decided acquisition. Marigolds, both tall, medium, and dwarf, as represented respectively by African, Calendulas, and French, flourish amazingly in heat and drought, only under these conditions decaying blooms have to be promptly removed in order to prolong the display. Petunias also do well, growing freely and blooming profusely, only they want a heavier and more retentive soil. Antirrhinums, of course, revel in the heat. I class them for the time being with annuals because they are treated as such; a sowing is made in slight warmth early in February, and they are

grown along quickly to secure nice sturdy plants by the beginning of May. The tall section is much the more enduring. I have been surprised to find the Marguerite type of Carnation doing so well, and am pleased to recommend them as thoroughly good dry weather plants. They were planted on a rather poor border facing due south with a wall as a background, a border that dries out both fast and deep, and yet at the present time they are looking well, not so vigorous as usual, but nice stocky plants that are throwing some very good flowers.

SUMMER BEDDING ARRANGEMENTS.—It is somewhat late in the year to write on this subject when the clearing of beds rather than the planting is under consideration, and yet in one respect it is the best time of the year for the purpose, because any alterations in the planting that may be deemed necessary for another season can be provided for by the increased propagation of those things likely to be required. The taste for mixed beds is becoming yearly more apparent, and, as in the case of other styles, is very pleasing when thoroughly well done. There is, however, a tendency to overcrowd and to push the number of species and varieties employed to an extent that is apt to make the mixture somewhat incongruous. The overcrowding is objectionable because the capabilities of individual plants are not given a chance, and what would under more favourable circumstances be a well-furnished bush is a weedy-looking plant of straggling habit, whilst the mixing together in the one bed of perennials, annuals, and bedding plants seems to me quite out of character and antagonistic to true gardening. It is also well to note that in the case of small beds too many colours should be avoided. Even with the same species, as, for instance, Verbenas, Petunias, or Phlox Drummondii, a good breadth of one shade is desirable, but when a lot of different things, as Lobelia, Echeveria, tricolor Pelargoniums, Iresine, or Coleus, are planted in a narrow strip either in lines or blocks, we get into a style approaching carpet bedding, one of the things, happily, fast dying out. There are plenty of things of dwarf habit, as Golden Harry Hieover and Manglesi Pelargoniums or dwarf Ageratum, that can be utilised for small beds, filling each with one variety and relieving the same slightly with a few plants of taller habit either in flower or foliage. E. BURRELL.

Claremont.

FLOWERING CLIMBERS IN DEVON.

It is not often that in this country such a resplendent display is afforded by *Bignonia radicans* as is so frequently to be seen on the Mediterranean shores, so that when this rare occurrence is met with it becomes all the more noteworthy. In a secluded village at the head of one of the tributaries of the river Dart the southern side of a house is covered by an old plant of this creeper. The specimen in question is said to be seventy years old, and its stem has a circumference of 18 inches near the base. It is growing in the red clayey loam of the neighbourhood and is evidently in the most vigorous health, its yearly shoots averaging 5 feet in length. In the month of August the effect produced by this plant was one of surpassing brilliance, the whole side of the house being a sheet of glowing scarlet with its abundant flower-clusters. This *Bignonia* is possibly better known under the title of *Tecoma radicans*. The Virgin's Bower (*Clematis Flammula*) is smothered in a wealth of ivory white, scented star flowers that perfume the wandering breezes with their luscious sweetness. Many cottage porches are embowered in the profuse wreathings of this plant that shrouds trellis and lattice windows with its odorous flower-trails. *Clematis Jackmani* has retained the rich purple of its blossoms well into the month, and here and there the early-flowering *C. montana* has supplemented its spring display by a sparse autumnal blossoming. *C. Vitalba*, the Old Man's Beard or Traveller's Joy, is garlanding tree and shrub with its greenish white seed-clusters,

soon to assume the smoke-grey tint that renders them so decorative when wreathing the topmost boughs of some old Portugal Laurel or *Ilex*. *Cobaea scandens* is bearing its bell-shaped purple blossoms, and *Eccecarpus scaber* its racemes of orange blooms, and in the hedgerows the Honeysuckles are flowering. On a sheltered wall *Mandevilla suaveolens* has produced its fragrant white blossoms, *Lophospermum scandens* has borne its rosy flowers, and *Mina lobata*, threading the growths of other climbing plants, is showing the scarlet and gold of its bloom sprays. The Morning Glory, though a troublesome plant to eradicate when once established in borders containing subjects of less rampant growth, is a beautiful sight when relegated to a position where it may swathe a rocky spur or envelop rough poles with its twining greenery and wide-spread, snowy blossoms. The blue Passion Flower and its white variety, *Constance Elliott*, are in flower, and their earliest fruits are in some cases already commencing to colour. *Physianthus albens* has also been in blossom, and in the same garden a large plant of *Plumbago capensis* that has lived in the open against a perpendicular cliff, sheltered from the north and east, for the past three winters without experiencing any injury is bearing its pale blue flower-heads. *Solanum jasminoides* is a lovely sight, being thickly starred over the whole of its greenery with countless white bloom clusters, which, though they shed their petals until the underlying ground is white as with snowflakes, are reinforced by fresh flower sprays in such quantity, that week by week the plant becomes a picture of more perfect beauty until it reaches the zenith of its display in mid-September, provided that up to that time it haply escapes being devastated by some unseasonable gale. In hard winters the *Solanum* is usually more or less cut back by the frost, but during the past three mild seasons it has received no check, and has in consequence made unrestricted growth, a specimen on one house that reached the eaves some five years since standing out to a depth of over 6 feet from the wall. The vivid scarlet flowers of *Tropaeolum speciosum* are now things of the past, but are succeeded by the purple seeds. Late-sown plants of *T. canariense* (the Canary Creeper) are still bright with their golden blossoms, and *T. tuberosum* is daily becoming more decorative with its orange and scarlet flowers, which, on their long foot-stalks are held well clear of the foliage and create a brilliant autumnal effect. A climbing variety of *T. Lobbianum* of a particularly bright scarlet, which has covered a little cottage from ground-level to eaves, is now a wonderfully striking sight, the glow of its innumerable vivid flowers being apparent from a considerable distance. Early in the month the *Wistaria* provided an unlooked-for addition to the charms of the garden by bearing an autumnal crop of perfumed flower tassels, which, though not as lavish as its spring display, was almost equally charming. S. W. F.

Torquay.

Helenium autumnale superbum.—This is one of the finest late-flowering hardy plants of recent years. Just now the fine pyramidal trusses are delightful, especially where the plants have been well watered and mulched. I have found it best to divide in spring, giving the young plants plenty of room. The immense pyramids of bloom are really marvellous. Some of those divided, which I should say are single stems, rise to a total height of 5 feet. The mass of bloom is fully 3 feet deep and 2 feet 6 inches through. Upon one I counted forty small branches, each one bearing from ten to twenty-five buds and blossoms. There could not have been less than 600 buds and blossoms upon this one stem. The colour is of the shade of yellow known as gamboge, being rather paler than *H. pumilum*. This *Helenium* would make a grand subject for a bed where something imposing is desired, and if interspersed with *Tritomas* a charming effect would be produced.—PHILOMEL.

ARENARIA AND CYPRIPEDIUM.

A VERY pretty effect is secured frequently in quite a haphazard sort of way in gardens by the association of one or two plants of distinct habit and flowering that happen to blossom at one and the same moment. It is so with the Mountain Sandwort (*Arenaria montana*) and the Mountain Lady's Slipper (*Cypripedium montanum*), as shown in the accompanying illustration. The former is, perhaps, one of the most free growing of all white spring-flowering plants, and for such there is ample room in many gardens quite regardless of their extent. As a free-flowering plant, however, the example in the picture is by no means a fair specimen of what this plant will accomplish, and it would appear in its present position rather in the light of some quick free-growing subject employed for the express purposes of furnishing the rocky stones. As a rule, in the early spring months this beautiful Sandwort is quite a sheet of pure white flowers, with usually only enough green to make an adequate foil for the mass of flowers. In the present instance the much extended growth is the outcome of the particular position occupied, and in this way serves to indicate how much a plant owes to environment and the like. By comparing the present photograph with one of the same plant in the "English Flower Garden" (edition 4, p. 296), the result will be clearly seen. One plant is grown in the open; the other is subordinate to other and stronger plants near that obviously rob it of its true character. On an open or sunny bit of rockwork this Mountain Sandwort would quickly cover a square yard by its growth, which in the ensuing spring would be a mass of snowy blossoms.

The *Cypripedium* which forms so pretty a group in the foreground is one of the prettiest of the Lady's Slipper family. The blossoms, however, as represented are exceptionally large for this kind, but as the plants have also made a fine leaf growth, it is obvious the crowns or tufts of plants must have been more than usually strong. A capital idea of the plant, however, may be gathered from the illustration, while the flowers are of an extremely delicate rosy white, veined and shaded with a deeper rosy hue. The sepals are of a brownish purple, and the yellow column is freely spotted with crimson. This pretty kind is also known as *C. occidentale*, and where the plants are strong, one to three flowers at intervals on the stem are frequent. Several of the Kew plants have produced two flowers on a stem, which may also be noted in some instances in the picture. The plant comes from the mountain regions of California, but is perfectly hardy in this country. In peat and light vegetable soil, as, for example, leaves half decayed, the plant does quite well, and, given a shady place with a fair amount of moisture, may be grown with success in British gardens. For two years in succession this pretty plant has figured freely in the hardy Slipper flowers shown by Messrs. Wallace at the Temple show, the plants having been grown in pots and generally with two flowers each. At Kew the shade is provided by a large block of rock, while the Sandwort trails over all this, as shown in the picture. For companions this Slipper flower has *Epipactis*, *Swertia*, and probably a few of the British Orchises, which in any case would be quite at home. Other plants suited for such a spot are *Claytonia sibirica*, *Omphalodes verna*, *Pratia angulata*, and the vernal and Bavarian Gentians. Many other things would be equally happy in a spot so permanently as well as uniformly cool, and good companionship is a thing to be aimed at in this style of gardening. E. J.

CACTUS DAHLIAS AT THE CRYSTAL PALACE.

NEW varieties come on apace, and pretty well a dozen received certificates at the hands of the committee of the National Dahlia Society on the 1st inst., although some of these got such awards rather by the skin of their teeth, one especially securing the coveted honour by seven votes as against six. Such voting shows that awards of this nature should be made only by a majority of fully one third of the members present. In another case three hands were held up in favour of a variety and none against. But in most cases the voting was practically unanimous, and when this is the case it is evident that the variety as presented is a good one. But the committee's requirement that for such purposes flowers and seedlings shall be shown as grown, and without support, seems absurd, as not one in twenty have other than weak stems, and hang down in a distressingly looking despondent way. One only



Arenaria montana and *Cypripedium montanum* in the rock garden at Kew. From a photograph by G. A. Champion.

seemed to have really stout flower-stalks, and that was the most striking one of the novelties, Green's White, which is the best and purest white Cactus variety yet seen. So far as relates to the others, no one seemed to make it a requirement that the stems should be stout and the flowers erect, and for that reason showing the flowers as grown seems absurd. Amongst other novelties shown were Zephyr, colour rosy salmon, tinted with mauve, a new colour, and singularly charming; Mrs. J. J. Crewe, large pale yellow, petals much incurved; Innovation, after Arachne, but here not yet good; W. Treseder, white, flushed pink, certainly not good at present, but a pretty colour; Olive, petals thickly set and much twisted, colour coral-red, flushed lilac, a charming variety; Elsie, rather large, but a charming colour, yellow, heavily flushed with rosy mauve; Whirlwind, one of the Fantasy type, but better, the petals more dense, incurved, but many of them placed as though under the effects of strong wind, colour

reddish carmine. Ajax is another of this type, very like the preceding, but is of paler hue. A very quaint variety is Mayor Tuppenny, as also is its name. It is large, petals twisted and incurved, but still rather thinly placed, centre yellow and outer petals reddish apricot. Two Emperors were staged, one a rich crimson-scarlet, one a rosy purple. The former seemed to be the better, but which of the two was certificated no indication was given at the time these notes were taken. The varieties here mentioned comprise the best of the present season's novelties so far, but all did not receive awards. I venture to think that there are too many trade growers on the committee, for these are all more or less interested in getting certificates awarded to novelties as a matter of trade. It is hoped that some so honoured will be seen in better form later on. It is but needful to look over the fine varieties new in commerce to see how fine in form and how beautiful in colour the best are. For this reason in selecting novelties for certificates, only those showing

distinct advance, especially in form, should be thus honoured. It is to be desired that at all future shows small award cards should be placed on the selected varieties by the committee as they go round, and thus assist both the Press and the public in seeking for needful information.

Of varieties in commerce, the following were shown in beautiful condition, and novelties must be good to excel them: Laverstock Beauty, reddish terra-cotta; Charles Woodbridge, rich crimson; Capstan, reddish salmon; Keynes' White, so far the best; Countess of Lonsdale, salmon, flushed mauve; Magnificent, buff; Mary Service, a lovely variety, coral-red, much flushed mauve; Island Queen, soft lilac; Countess of Gosford, scarlet; Alfred Vasey, soft rosy pink; Starfish, bright scarlet; Lucius, orange-red; Fantasy, coral-red, much incurved; Ebony and Ranji, both black-crimson and the best of that colour; Harmony, apricot; Lady Penzance, yellow, and Britannia, pale buff. Anyone having this collection of named varieties will find them very hard to beat. Looking over the other day the large collection of varieties growing at Chiswick, I could but note how very little has been yet done by raisers in the direction of getting dwarfier habits and flowers well thrown above the foliage. It seems as if a long time must elapse ere Cactus

Dahlias can be made effective for garden decoration. In that respect the pretty pompons greatly excel them. A. D.

Narcissus cyclamineus major.—As I was the first person in England to whom the Baron de Soutellinho, of Oporto, then Mr. Alfred Tait, sent the long-lost *N. cyclamineus* after its re-discovery by him, I am naturally interested in the plant. I therefore wish to know what is *N. cyclamineus major*. English bulb catalogues have for the most part ceased to offer *N. cyclamineus*, and only offer *N. c. major*, though this new bulb does not seem to have reached the Dutch growers, as Messrs. Roozen, Tubergen, Krelage, and others who favour me by sending their catalogues, make no mention of the major, though they all offer *N. cyclamineus*. I have not been regular of late in my attendance at the meetings of the *Narcissus* committee, so do not know whether any certificate has been given or registry has

been authorised for this new variety, but I have grown *N. cyclamineus* ever since I first received it, and believe that the average size of my flowers is equal to that of those now supplied by the bulb dealers. It is true that several of my seedlings have produced enormous flowers as large as those of the ordinary wild *N. pseudo-Narcissus*, and I at first thought these might be the major development now offered by the English dealers, but on further comparison of the characters I concluded that they were spontaneous hybrids with some large form of *N. pseudo-Narcissus*.—C. WOLLEY-DOD, *Edge Hall, Malpas*.

ECKFORD'S AND OTHER SWEET PEA NOVELTIES IN AMERICA.

IT is very pleasing to record that the Sweet Pea novelties of Eckford's raising which were offered in the States this year through W. A. Burpee and Co., of Philadelphia, Pa., have afforded much satisfaction. The colours of this latest set of novelties are decided and distinct. Of late years there has been a noticeable weakness in the famous English raiser's introductions so far as decision of colour was concerned. It is not disputed that they were different from others already in cultivation, but that alone will not satisfy the American critic; our horticultural standard is not ruled by association nor by sentiment. The rarity of a variety or the mere fact that it is new does not enter heavily as a factor in regulating its selling value. There must be intrinsic merit, and intrinsic merit in a florist's flower surely should be its possibility of appealing to the taste of and captivating the attention of the million rather than drawing notice from the specialist.

COUNTRESS OF CADOGAN, with standards of violet-blue and wings of deep sky-blue, gives a very pretty effect in the mass, as the two colours blend well at a very short distance. This is a qualification that does not receive enough attention in many plants. The colour impression of a single flower closely looked into will often give a very false idea to the observer, and therefore close analyses should be accepted simply for what they are. This variety has to meet here a much better, richer, and deeper blue Sweet Pea of the same type in Navy Blue (Burpee). True, it is not navy blue, but it is so named; it has a considerable amount of violet in its flowers, especially in the standards, but the distant effect is a true blue, several shades deeper than in Countess of Cadogan. I learn that some English growers of the two varieties report that the two are identical, but whatever that may be with you, they are very clearly distinct here.

LADY GRISEL HAMILTON is assured a leading place as a flower of clear light lavender-blue or greyish blue. It is a true self, and although slightly hooded, is of a satisfactory form.

OTHELLO is a dark flower, but, as frequently happens from Mr. Eckford's descriptions, cannot be recognised. I quote from the catalogue of the introducer: "In reality the flower is a very deep tone of an intense, very intense shade of magenta-lake, the slight bluish cast being more noticeable in the wings than in standard, which by transmitted light shows up as a clear deep magenta bordering on a port wine colour. It is a glorious flower, of fine form, size and substance."

DUKE OF WESTMINSTER is intermediate between the roses and the blues. The well-rounded standard is rosy lake, heavily veined with a more intense tone of the same colour, giving almost the effect of the self. The wings are of the same character, but having a violet cast. The form of the flower is good and well expanded and fine in substance.

HON. F. BOUVIERIE gives the effect of a delicate salmon-pink and is superior in its colour to the older Peach Blossom.

LADY SKELMERSDALE is a somewhat hooded flower, the standard rosy lake, with much paler wings.

MRS. DOVEDALE (Eckford) and Burpee's American novelty FASHION are two varieties which run very closely together, and one will no doubt have to go under. The general effect is in favour of Fashion for depth of colour, while the other leads in brilliancy. Both these varieties are of a rich rose tint, a faint suspicion of primrose appearing occasionally on the standard of Mrs. Dovedale, whilst a bluish cast slightly overshadows the wings and to a less degree the standard of Fashion.

SADIE BURPEE is of the purest white, perfectly clear in all parts of the flower. The form is charming, the standard being very full and broad, the wings large, expanding well, and so displaying an unusual amount of surface, giving an idea of solidity that is very remarkable. It comes in both black and white seed, and is expected to prove of extra constitution, a feature that hitherto has been lacking in the whites. I am inclined to think that this variety will at once become the standard in its colour.

In closing these notes it will be well to notice two other American novelties of merit. The first is

PINK FRIAR, a pink variation of the well-known Grey Friar; hence its name. The petals are of the faintest pink tint, a little streaked in an irregular manner with a more intense tone; altogether a very exquisite flower. Last, but by no means least, comes

GORGEOUS, which fully comes up to the high standard that one would expect from its name. The standard is pure orange-red and of dazzling brilliancy. It is of the character of Meteor, but surpasses it in all respects. The large wings are of a bright orange-crimson colour. The stems are very fine and the individual blooms well displayed. It is certainly the brightest in its class. It lights up wonderfully.

LEONARD BARRON.

TABERNÆMONTANAS AND EUPHORBIAS PLANTED OUT.

As a general rule *Tabernæmontanas* are grown in pots, and thus confined and given good attention they grow and flower fairly well. It is when planted out, however, that the best results are obtained. I recently saw some healthy productive bushes in a span-roofed house at Carrow. The plants are old and have been regularly cut back each season early in the year. This treatment they stand well, breaking away into new growth freely and blooming profusely. When I saw them they were thickly studded with flower-trusses, but they were not opening quite to Mr. Jones's (the gardener) liking. This he attributed to the house having been kept too cool. He had reduced the artificial heat as the season advanced by way of experiment, but it had taught him a lesson. An equal quantity of loam and peat, with plenty of grit to secure an open condition, was what the plants were rooting in, and that it just suited them was evident from their appearance. The roots are kept somewhat drier in winter, and particularly for a week or two previous to cutting back in January. I do not think *Tabernæmontanas* are so liable to attacks of mealy bug as *Gardenias*, although that is their chief enemy, and their fragrance is very similar to that of the *Gardenia*. Growing in the same house and occupying the opposite bed was a healthy lot of the brilliant and useful *Euphorbia jacquiniæ-flora*. The treatment accorded is exactly similar to that given to the *Tabernæmontanas*, and no one after seeing the plants at Carrow would go back to pot culture unless compelled. The long healthy growths are tied to a wire trellis, similar to the way in which Cucumbers are done, about 1 foot or 18 inches from the roof. C.

Dahlia (Cactus) Mrs. Stephenson Clarke.—This kind is at least distinct from many of its fellows, and as such should be of value on the exhibition board as well as in the garden. Like most florists' flowers, the Dahlia appears to have

reached the pinnacle of excellence so far as the florist has set his ideals, and the only hope now is for new and distinct colour breaks. This kind has a base of gold, while the tips of the florets are orange-scarlet, the two shades being more decided than in any other we remember. It should prove an attractive garden plant.

Marigold Silver King.—Compared with the better-known Legion of Honour, this Marigold is of dwarfer, more spreading habit and the colour of the blotches on the petals is even more clearly defined than in that kind. The outer tint is a pale sulphur-yellow, the blotches a brownish maroon. Grown side by side in the same border at Shipley Hall, Derby, they are abundantly distinct and make a very bright and telling edging. Another interesting plant is a variety of the common Feverfew, with bright yellow button-like flowers that show up very prettily against the deep green foliage.

BEGONIAS AND DRY WEATHER.

SOME have gone as far as to say that the Begonias would oust the Geraniums from the flower garden, but, good as the former are in their many shades of colour and ornamental foliage, they lack brilliancy and cannot be seen to advantage unless close at hand. Not only so, but unless special attention is bestowed on them they make but poor headway in a tropical summer. A drippy season is supposed to suit them best, and this is detrimental to the majority of summer bedding subjects. Much may, however, be done towards making the Begonia a success even in the hottest and driest summers by giving a suitable root-run and judiciously mulching and watering. Only a few days since I inspected several large beds in a private garden. The gardener complained of the season being unfavourable to a free growth, but I could plainly see that had the beds, which, by the way, were of a lightish, open character, been well mulched as soon as planting was completed, the plants would in all probability have been twice the size, as so much of the moisture escapes from unmulched ground, and Begonias must have plenty of moisture. Some shun mulching from a labour point of view, and are constantly wasting time by administering dribbling waterings; whereas when once mulched what water is given is retained, and half the after labour suffices. A fairly deep moisture-retaining though well-drained root-run suits Begonias best, and when the same site is used year after year a free incorporation of some entirely fresh material of the above nature should take place at least every third year. This treatment, together with a gradual and hardy system of starting the bulbs into growth in spring, is the only way of securing a regular and satisfactory growth. One amateur I know always starts his bulbs in cocoa-nut fibre, giving cool quarters, and plants with a small wig of this material attached to the roots. They seem to root freely in the fibre. He also mulches the surface with the same material, and digs the old mulch into the bed in spring. B. S. N.

Lifting *Lilium candidum*.—The notes both of "H. R." and "J. C. B." at page 155 are instructive. It used to be thought that lifting the bulbs of this old Lily, or, indeed, disturbing them in any way, was very harmful, and it must be confessed that one often sees grand clumps in cottage gardens where they have stood unmolested for years, but I think the let-alone system may be carried too far, for, as "H. R." has proved, the younger bulbs arrive at a flowering stage sooner and make better bulbs when lifted and replanted in new soil than they can possibly do if left crowded together in a semi-starved condition. I was much troubled in one garden by the disease, and never really mastered it. It seemed worse in excessively hot seasons. I quite believe with "J. C. B." that well-nourished bulbs are less liable to attacks than weakly, half-starved ones, but I have known no end of trouble taken with a view to eradicate the disease, but without avail. I once destroyed all my own stock

and procured new bulbs from a nursery, planting them in new loam, but, although growth was very vigorous, it fell a victim to disease the first summer.—J. C.

ROSE GARDEN.

SOME GOOD CHINA ROSES.

AMONG the China Roses we have had during recent years some splendid improvements in colour. The one figured above is to my mind one of the most beautiful of modern Roses. There is an indescribable charm about the flower in its wondrous tints of rich rosy pink, heavily shaded with canary-yellow and orange, also in a less degree in its pretty foliage. The buds ere they unfold have a certain resemblance to those of l'Idéal in colour, but they are not quite so large. Although single specimens either as bushes or upon standards are lovely, the Rose must be seen in groups to form any idea of its value as a first-class kind for the garden. It will grow and thrive equal to, if not better than, any of our Tea Roses. The plants should be treated well at the commencement. Where soil is not good, make it so by working in a few loads of good loam of rather a strong texture. The let-alone system of pruning should be adopted. I am no advocate for mutilating the China Roses in the way thought necessary for kinds grown for exhibition, and am glad to see a more rational treatment advocated by the leaders in the Rose world as regards pruning these China Roses.

The parent of the above-named variety is Mme. Laurette Messimy. It was obtained by M. Guillot in 1887, being the result of a cross between an old China Rose named Rival de Pestum and the Tea Rose Mme. Falcot. We have in Mme. E. Resal a distinct proof of the fact well known to hybridists that the second and third generations of a cross often produce the best results. This is no disparagement of Mme. Laurette Messimy, for it will always hold its own. When once a variety has taken hold of the public it is a difficult matter for any new-comer to oust it from its position. I think of the two kinds mentioned above the parent is the better grower.

Another fine novelty among these Roses is Queen Mab. Its buds are of the most beautiful shade of rosy apricot, suffused with orange, somewhat resembling the Tea Rose Safrano in shape, only of a more beautiful and a richer colour. Queen Mab is a first-rate grower, richly endowed with beautiful foliage of quite a ruby colour in the young state. Other good new kinds are Irene Watts, a very delicate shade of salmon-pink, another seedling of Mme. L. Messimy, and Duke of York, a most valuable variety, changing from rosy pink and white to rich crimson. The centre of the flowers, which are large for a China, is often flamed with crimson, heavily bordered with white. By artificial light this variety has a most unique appearance. A very pretty and promising kind is Aurore, one of the latest of the French novelties. The colour is crushed strawberry, and the ruby foliage is a delightful contrast. I have formed a good opinion also of Jean Bach Sisley, but should like to see a little more of it before pronouncing upon its merits.

Of the older Monthly Roses, the Common Pink is still among the best. For gorgeous colouring there is a rivalry between Cramoisi Supérieur, or Agrippina as it is sometimes called, Sanguinea, and Fabvier. I should be disposed to award the first position to the first-named, although it is not quite so free in growth as one could desire. Sanguinea or

Old Crimson is good, and rather darker than Cramoisi. Fabvier is not quite so brilliant and it is not more than semi-double, but it is, nevertheless, a free and good kind for massing. Armosa, though sometimes classed as a Bourbon, is as much a Monthly Rose as any of the above. It is a charming double variety with neat flowers of a silvery pink colour and throws up enormous trusses of bloom. It is certainly one of the best for massing, as it also is for potting up to bloom in the winter or early spring. White China Roses are not very numerous. The best of all is Ducher. Fellenberg, although usually classed with the Noisettes, is as much a Monthly Rose as any here mentioned. Its colour is bright crimson. A really first-rate variety is Mrs. Bosanquet. This old Rose is found now in almost every garden. The pale flesh blossoms have a delightful freshness about

it is bright rich crimson, in autumn almost maroon or claret colour. They are both good for pots. These two with Cramoisi Supérieur, Armosa, Common Pink, Mme. E. Resal, and Mme. L. Messimy would be a fine selection for this purpose. I cannot conclude this short article without referring to a variety (Gruss an Topfritz) lately certificated by the Royal Horticultural Society and described in the pages of THE GARDEN.

The China Roses are excellent for hedges. Often one desires sheltered recesses for choice shrubs and half-hardy plants during their infancy. Such recesses might well be formed with Monthly Roses of the more robust type.

PHILOMEL.

THE VICTOR VERDIER GROUP.

EXCEPT as regards fragrance, of which they are lamentably deficient, this race may be considered one of the most useful the rosarian has yet produced. As sturdy free bloomers they stand unrivalled. Various conjectures have been advanced as to the origin of the type, but I believe nothing is definitely known. It was introduced by M. Lacharme in 1859, and since that date a numerous progeny has sprung from it directly by seed and sports and indirectly by cross-fertilisation. It is remarkable that much of its individuality is embodied in the offspring, such as want of fragrance, nearly smooth wood and free-flowering qualities.

Those who grow for exhibition must watch carefully when the time comes for disbudding to remove the centre bud if it shows signs of being malformed, for this defect is a distinct peculiarity of the tribe. The usual practice in disbudding is to retain the centre bud and remove the two tiny outer buds, whereas in this case the reverse is required. The colour of Victor Verdier is of a very clear shade of cherry-rose and the



China Rose Mme. Eugène Resal.

them and they are also large and double. Another good kind is Archduke Charles. The flowers open a rose colour with white edges; as they expand, however, some of them gradually change to crimson, the various colours in one truss of bloom producing a striking effect. Eugène Beauharnais is also good. In giving a selection of some good China Roses two pretty kinds cannot be omitted, albeit they have more resemblance to the Polyantha group than to the Chinas. They are, however, true Monthlies if one accepts the term as applying to real perpetual Roses. These two kinds are White Pet and Red Pet. The former in flower is an exact counterpart of the rambling Rose Félicité-Perpétue. It is, however, dwarf, and yields immense trusses of bloom. Red Pet is somewhat similar save in colour. In summer

form is globular and high-centred. The buds of many of the varieties are long and handsome. The type makes a good bedding variety where the colour is admired, but as a rule these rose-coloured Roses are the least beautiful from a colour point of view. Whilst being fairly hardy, a very sharp winter leaves its damaging marks upon the wood, so that it has to be cut back very hard the following spring. I shall not attempt to name all the varieties that compose this tribe, many having long since passed out of English lists. The most important are Etienne Levet, Countess of Oxford, Mlle. Eugénie Verdier, Mme. Bois, Suzanne Marie Rodocanachi, Mlle. Marie Finger, Hippolyte Jamain and Belle Lyonnaise.

Closely related to the type either as sports from its progeny or by cross-fertilisation we have such kinds as Captain Christy, Paul Neron, Duke of Fife, Pride of Waltham, Pride of Reigate, Mar-

guerite Boudet, La Fraicheur, and probably Queen of Queens. Perhaps the best use Victor Verdier was ever put to was when the late Mr. Bennett cross-fertilised it with *Devoniensis*, and by this means gave to the world a glorious Rose in Lady Mary Fitzwilliam, which, although a wretchedly poor grower, somewhat makes amends for by seeding freely. Some of the crosses obtained from it, such as Mme. Abel Chatenay, are, to say the least, quite robust in habit; in fact, this lovely Rose is strong enough for a pillar, and, moreover, it is very sweet, a distinct departure. Other good kinds obtained through somewhat the same channels are *Souvenir du President Carnot*, *Souvenir de Mme. E. Verdier*, *Germaine Trochon*, *White Lady*, *Antoine Rivoire*, and *Alice Furon*. That these partake of the Victor Verdier character is distinctly apparent in the huge seed-pods they will yield; the latter kind I have seen almost as large as Nonpareil Apples. Yet another Rose to be included in this is Mrs. W. J. Grant, reputedly a cross between Mlle. Marie Finger and La France. Perhaps no better tribe exists for pot culture than the one under notice, their stiff, solid flowers lasting well, and the habit of growth enables them to be exhibited upon the plant to the best advantage. A number of the kinds strike freely from cuttings, their smooth, solid wood being distinctly favourable for this purpose.

PHILOMEL.

Rose Souvenir de la Malmaison.—In his recent remarks on a memorial garden, Mr. Evbank refers to the longevity of the above Rose as proved by the one in his own possession. I have often wondered why this good old Rose was not more generally met with. Probably the desire to possess Roses of the finest symmetry has been instrumental in banishing some of the old favourites. The largest bushes I ever saw were of *Souvenir de la Malmaison*. They grew in an old Essex garden where large quantities of cut flowers were in constant demand, and these bushes yielded quite a wealth of bloom during autumn. So far as I know, there is no other variety so floriferous at that season. The colour is very beautiful when the Roses are cut in the right stage, and arranged loosely in vases they have a very chaste and elegant appearance. If I remember rightly, the bushes in question, which must have been of considerable age, were on their own roots.—J. C.

AUGUST IN SOUTH DEVON.

THE glorious summer weather that marked July prevailed unbroken, save for an occasional local thunder-shower, until the concluding days of August. On the 25th a fresh south-westerly wind and a cloudy sky gave promise of a change, but the two following days were dry and sunny. Early in the morning of the 28th heavy rain storms occurred, but from noon the remainder of the day was bright. A strong southerly wind and drenching rain ushered in the morning of the 29th, and continued with but little intermission until night-fall, but the two remaining days of the month were fair, the bright sunshine being broken only at long intervals by brief showers. The long-expected change is doubtless near at hand, but the barometer is still high and steady, and has as yet given no warning of any alteration in the atmospheric conditions. The swifths have already left for more southern climes, but the swallows and martins are later in arranging for their departure, and had not, up to the end of the month, congregated on the housetops in their usual numbers, as they generally do in the latter days of August, essaying short flights in company ere they undertake their long migratory pilgrimage. No tint of yellow is perceptible in the foliage of the trees, as was the case in 1897 before the opening days of September, and the grass, though considerably burnt up on dry hillsides, has not assumed the universal yellow-brown tint that was so apparent during the summers of 1897 and 1898. In the early days of the month the Willow Herb was still bright in a marshy spot at the foot

of a wooded hill, and the Meadow-sweets filled the surrounding air with their fragrance. A tiny orchard in the recesses of a deep coombe, whose steep sides were clothed with woods, was literally full of Meadow-sweets, and the tall mauve-pink flower-heads of Hemp Agrimony, fringing an overgrown streamlet which meandered between the gnarled and Lichen-covered trunks of the few neglected Apple trees that remained, with their serried ranks of blossom on which peacock butterflies flaunted their many-hued spots and the great Fritillaries unfolded their orange-brown, black striped wings, ever and anon displaying the silver-green reverse as they closed their pinions, while the vermilion-banded red admirals hovered aloft or poised lightly on the bloom-tips. On some high embankments by the roadside the Fennel grows in quantity and is now in flower, its aromatic odour assuming an almost pungent character in the hot afternoon sunshine. By the river-sides the berry-clusters of the Mountain Ash make vivid spots of colour, a brilliancy that the birds do not permit to remain long in evidence, since they commence their attack on the berries immediately they ripen.

Acanthus mollis has thrown up a dozen or more tall flower-wands to a height of between 6 feet and 7 feet, and *A. spinosissimus* has produced its smaller bloom-spikes. Though the deeply-cut foliage of the latter is interesting as a change, it lacks the noble grace of the great arching leaves of *A. mollis*, whose upper ones curve outward at a height of 4 feet from the ground, while the lower leaves have a spread of over 8 feet. Other handsome foliage plants particularly decorative during the month of August are the Bamboos, of which *Thamnocalamus Falconeri* can scarcely be surpassed for grace, *Gunnera scabra* and *G. manicata* with their giant leaves seen to the best advantage by the waterside, the Plantain Lilies, the blue-green foliage of *Funkia Sieboldi* being far more attractive than that of other members of the family, *Arundo conspicua* with its slender arching, plume shafts, and the giant Reed (*A. Donax*) with its pennoned lances, while of annuals, *Ricinus Gibsoni*, *Zea variegata*, and the common Hemp (*Cannabis sativa*) are valuable owing to their grace of contour. *Achillea Ptarmica* fl.-pl. The Pearl is still blossoming bravely. In the garden and in the house this little flower, though small and inconspicuous in its individual blossoms, is by no means to be despised, since its profuse flower-heads create a snowy breadth in the border from early summer until autumn, and remain fresh for many days when used for indoor decoration. The Monkshood (*Aconitum Napellus*) has borne a second crop of tall flower-spikes, and the blue African Lily (*Agapanthus umbellatus*) has afforded a delightful picture when naturalised on a gently sloping lawn and bearing on lofty stems numerous wide-spread flower-clusters above its drooping, strap-shaped foliage. The white variety of this flower is particularly charming, but, as a rule, its bloom-umbels are smaller than those of the type. A very pale blue variety, which I brought from the Cape more than ten years ago, has also been in flower. It is in warm localities like the south-west, where these subjects can be planted out, that their beauty as garden flowers can best be appreciated, but in colder districts where this method of culture is out of the question fine effects are obtainable by growing them in tubs and large pots, which may be afforded shelter during the winter and arranged on terrace walks in the summer months. *Agathaea celestis* still bears its soft blue flowers, and *Alstroemeria aurantiaca* at the commencement of the month held its orange blossoms aloft on 4-foot-high flower-stems. A dry and almost perpendicular bank is crowned with a deep fringe of *Alyssum maritimum*, the Honey Flower, as it is often called by the villagers, which was sown along the edge of the bank four years ago, and though usually treated as an annual, has assumed a perennial habit and now forms a penthouse roof a foot and more in depth over the steep verge. Seed has fallen freely at the foot of the bank, and here another thick line of *Alyssum* is in full

flower. The past three winters have proved so mild that the plants have remained uninjured from year to year, but doubtless such a visitation as was experienced in the opening months of 1895 would effectually destroy their vitality. About mid-August the form of *Amaryllis Belladonna* known as *A. blanda* commenced to flower. Its blossoms are of the palest flesh tint, and are far more gracefully formed than those of *A. Belladonna*, the petals recurring, as in the case of *Lilium Harrisii*, instead of merely sweeping outward, as in the type. *A. blanda* has green stems, generally about 2 feet in length; whereas those of *A. Belladonna* are chocolate-coloured, and the former sometimes bears as many as fourteen flowers on a scape. I brought the original bulb from the Cape some fifteen years back, and have now a dozen full-sized bulbs. I find it quite as hardy as *A. Belladonna*, and, if anything, a freer bloomer. I also have some crosses between the two varieties, which have stems of a brownish green and petals of a colour intermediate between those of the two forms, while they are less reflexed than in the case of *A. blanda*. These usually come into bloom about a week later than *A. blanda*, but rather earlier than *A. Belladonna*. The latter expanded its first blooms before the close of the month.

Anemone japonica alba Honorine Jobert is in fine flower and is in much request for indoor decoration, its white, golden-centred flowers being models of grace and simplicity. An arrangement of these and bloom sprays of *Salvia patens* form an effective colour contrast for daylight use, but as the *Salvia*'s deep blue turns to black, or almost so, under artificial light, it is inadmissible after sundown. In good soil the Japanese *Anemone* makes exceptionally vigorous growth, and I measured a large plant a few days since that had attained a height of almost 6 feet. The pure white *Antirrhinum* are amongst the most valuable of annuals, since, if they are not allowed to seed, they remain in bloom for a lengthened period. Many of the plants passed through the last winter uninjured and are now large bushes. *Antirrhinum* will flourish in a surprisingly small amount of soil, and during the summer I noticed some plants, evidently seedlings, about 18 inches in height and blooming well, growing on an outside ledge of a greenhouse wall where about an inch of soil had lodged. Arums have been flowering profusely where planted out by the waterside, and the earliest of the Starworts to come into bloom, the beautiful *Aster Amellus bessarabicus*, expanded its first blossoms at the commencement of the month. This is one of the most satisfactory of all the Michaelmas Daisies, since it bears its large mauve, golden-centred blossoms through many weeks, and does not possess the spreading habit that renders many Starworts unsuited for borders limited in breadth. *A. Novi-Belgii* Harpur-Crewe has begun to produce its white flowers, and some of the earlier Starworts are also in bloom. The Plume Poppy (*Bocconia cordata*) has afforded a fine effect in the wild garden, having attained a height of nearly 9 feet, some of its spires of inflorescence ranging in colour from ivory-white to burnt-almond colour, being almost 3 feet in length, its large, deeply-cut, blue-green leaves, with their white reverses displayed by the passing breezes, adding a pleasing note of soft colour to the picture. The tuberous *Begonias* have been brilliant in the extreme, and old bushes of golden *Calceolaria*, growing in light soil on sloping banks, some a yard and more in diameter, have been sheets of yellow. Of the Campanulas, the Chimney Bellflower (*C. pyramidalis*) has borne its tall flower-spikes, 6 feet and more in height, studded throughout their length with white, purple, or pale blue blossoms, while *C. cespitosa*, forms of *C. carpatia* and other dwarf-growing Campanulas have been in bloom. The large-flowered Cannas, with their brilliant vermilion and orange blossoms, have created gorgeous effects in gardens, while the less insistent charms of *C. Ehmanni* *iridiflora*, whose large Musa-like leaves and arching spike of cerise-pink flowers offer an effective contrast to

the more erect foliage and brighter colours of the newer race, have met with equal appreciation. Marguerite Carnations are already bright in many gardens, and *Chelone barbata* has borne its tall spikes of flower along which the pendent orange-scarlet blossoms are set at intervals of a couple of inches. *C. mexicana* is very similar in habit, but bears flowers of a pink hue, both this and the former plant being now classed under the genus *Pentstemon*. *Chrysanthemum maximum* is bearing its large white stars in profusion, but the dwarfier form, known as *C. m. grandiflorum*, which is far more compact in habit and bears larger flowers, had well-nigh concluded its period of bloom before the type commenced to expand its flowers. *Clematis Davidiana* has formed a good-sized bush studded with corymbs of pale purple flowers, and the autumn *Crocus* (*Colchicum autumnale*) has revealed the faint lilac of its fragile chalcies, while *Cosmos bipinnatus* has its deeply pinnate *Nigella*-like foliage thickly set with its single white and pale pink flowers in the case of specimens raised under glass and subsequently planted out, though where seed was sown in the open ground the plants, already 5 feet in height, are showing as yet no signs of flowering.

Coreopsis grandiflora is still bearing its rich golden blossoms, and late-sown seedlings of the blue Cornflower are in good form. *Crinum capense* is flowering freely in some gardens, a dozen fully-expanded bloom-scapes in one bed producing a most ornamental effect. *C. Moorei* and *C. Powellii* are also in bloom. *Crocsmia aurea* was in full beauty early in the month, its golden-orange blooms being most attractive. It thrives well in sandy soil, but, unlike the *Montbretias*, spreads considerably underground, often throwing up shoots at a distance of 2 feet or more from the main clump. *Cactus Dahlias*, although perhaps at their best during the month of September, have been decorative throughout the whole of the past month. A good three dozen are: *Alfred Vasey*, reddish crimson, shaded amber; *Arachne*, white, edged crimson; *Bridesmaid*, rose, shaded primrose; *Beauty of Arundel*, crimson-lake; *Blanche Keith*, rich yellow; *Charles Woodbridge*, bright crimson, shaded purple; *Cinderella*, claret, shaded crimson and rose; *Cycle*, ruby-red; *Daffodil*, canary-yellow; *Delicata*, pink, shading to pale yellow; *Eileen Palliser*, yellow; *Ebony*, black-maroon; *E. J. Deal*, scarlet; *Francis Humphries*, bright orange; *Fusilier*, deep salmon; *Gloriosa*, crimson-scarlet; *Harmony*, reddish bronze, shaded yellow; *Harry Stredwick*, crimson-maroon; *Island Queen*, light mauve; *J. E. Frewer*, vermilion; *John H. Roach*, soft yellow; *Keynes' White*, ivory-white; *Lady Penzance*, yellow; *Magnificent*, buff; *Matchless*, dark maroon; *Mary Service*, heliotrope, shaded yellow; *Mayor Haskins*, glowing crimson; *Miss Annie Jones*, crimson-scarlet; *Mrs. A. Beck*, salmon-red; *Mrs. Francis Fell*, white; *Mrs. Peart*, white; *Mrs. Wilson Noble*, salmon-pink; *Night*, very dark maroon; *Professor Baldwin*, orange; *Starfish*, orange-scarlet, and *Tillie*, salmon-rose, shaded mauve. Here and there a few late light blue flower-spikes of *Delphiniums* are visible, and *Dianthus Napoleon III.* was still bright with its crimson blooms at the commencement of August, while a stray golden star marked the spot where earlier in the year the *Doronicums* were a blaze of yellow. The *Globe Thistle* (*Echinops Ritro*) is bearing its spiked blue flower-spheres; the Mexican Daisy (*Erigeron mucronatus*) is set with a profusion of its pink and white stars; *E. speciosus*, perhaps more commonly known as *Stenactis speciosa*, is still producing its mauve yellow-centred blooms; the *Sea Hollies* (*Eryngium*), with their metallic-blue flower-bracts, have been decorative throughout the month, *E. Oliverianum* being the best of those usually met with in gardens and being very generally sold for *E. amethystinum*, the true form of which plant is rarely to be met with.

The Coral Tree (*Erythrina crista-galli*) has thrown up its crimson flower-spires to a height of 6 feet, some of its bloom-spikes being fully 3 feet in length. When in full flower and bearing from

one to two dozen heads of blossom it presents a gorgeous sight in the garden. As a rule the plant dies down to the ground level each winter, but I am acquainted with one specimen in the county, planted against the wall of a hothouse, which has a woody stem about 5 feet in height with a circumference of 18 inches close to the ground. *Eschscholtzias* are brilliant in roadside rockeries and in cottage gardens, where great bushes, in some cases almost trees, of *Fuchsia gracilis* and *F. Riccartoni* are in profuse bloom. The *Gaillardias' crimson* and gold still brightens the garden, and at the commencement of the month the mauve *Galega officinalis* and its white variety were smothered in flower. The *Cape Hyacinth* (*Galtonia candicans*) held aloft its tall spires of ivory-white, pendent bells, and where massed in quantity presented a chaste and gracious effect. In one garden a colony of considerably over 100 bulbs was in full flower, the purity of the white bloom-spikes, ranging in height from 2 feet to almost 6 feet, enhanced by an evergreen background, while the noble form of the wide, tapering leafage gave an artistic finish to the picture. These *Galtonias* are also exceedingly useful for arranging as cut flowers in tall vases. The *Gazanias' golden glow* is still present, and *Geum coccineum* shows here and there a spot of crimson. *Gladiolus brenchleyensis* has dowered the gardens with its vivid colour, while varieties of the *G. Childsi*, *G. Lemoinei* and *G. Nanceianus* sections have displayed their tall spikes of beautiful blossoms. *Godecias* have afforded a breadth of bright colouring where the individual plants have been given room to assume their rightful dimensions, a little garden on the edge of the moor being especially remarkable for the excellence attained in the culture of these attractive flowers.

Gypsophila paniculata has spread its billowy flower-lace over the verge of the pathways, and is in constant request for furnishing indoor decoration—so much so indeed, that unless plants are grown in the spare garden for the purpose of affording cut sprays, the occupants of the borders are apt to lose much of their attractiveness before their blooming period is past. In cottage gardens the great *Sunflowers* stand with their brown discs largely patronised by the banded humble bees, a specimen or two of the primrose-petalled variety being sometimes observable among the ranks of the old-fashioned golden-flowered type. Many of the perennial *Sunflowers* are also in bloom, such as varieties of *Helianthus multiflorus* and its double form, *H. latiflorus*, and *H. rigidus* Miss Mellish. The *Heliotrope* beneath the windows perfumes the surrounding air. The *Day Lilies* (*Homocallis Kwanso* and *H. aurantiaca major*) were in bloom in the opening days of August, when the *Hollyhocks* were attractive in their robust comeliness, their tall shafts of bloom thrown into high relief by whitewashed cottage walls, and now, at the close of the month, the *Hydrangeas* are at their best, and great bushes, 7 feet high and of twice that diameter, standing on either side the wooded drives are bearing a wealth of massive blossoms almost *Forget-me-not* blue in colour. The white *Everlasting Pea* (*Lathyrus latifolius albus*) has covered the trellis with its snowy blossoms, and *Lavatera trimestris* in its three colours, pink, white and red, has been most decorative. Of *Lilies*, the handsome *L. auratum*, the scarlet *Turk's-cap* (*L. chalcedonicum*), with its vivid blossoms, *L. Harrisii*, *L. Humboldtii*, with orange-yellow, lake-spotted flowers, *L. speciosum album* and the deep-coloured *L. s. Melpomene*, the *Swamp Lilies* (*L. superbum*, *L. pardalinum* and *L. canadense*), and the *Tiger Lilies* (*L. tigrinum splendens* and *L. t. Fortunei*) have all been in bloom, while in a garden not far distant I was shown the most vigorous specimen of *L. nepalense* that it has ever been my lot to see, which, on a stem fully 6 feet high, was bearing three fine flowers, chrome-yellow where the petals reflexed and deep purple in the interior, and emitting a most delicate fragrance. The leafage was intact and was all of a dark green colour. In the first week of the month the green-leaved *Lobelia cardinalis* was in fine flower, while

towards its close the varieties of *L. fulgens* and *L. rosea* were at their best. In deep, moist soil *L. fulgens* attains a height of 5 feet and passes through the coldest winters uninjured in the open bed. *Lychnis chalcedonica*, *L. Haageana* and *L. diurna rosea* have flowered well into the month, and by the waterside the purple *Loosestrife* (*Lythrum*) has blossomed, while the *Torch Lilies* (*Kniphofia*), with close-set, orange-scarlet spear-heads, blaze from an evergreen setting. *Mesembryanthemums* are still bright in light soil in proximity to the sea, and the crimson *Bergamot* (*Monarda didyma*), as well as its white form and the unattractive-coloured *M. hirta*, bloomed throughout the month, as did the *Montbretias*, with their orange-scarlet flower-scapes, the latter having an extremely pretty effect when seen spangling the grass of an open wood. Late plants of *Nicotiana affinis* in the twilight hours distil their fragrance far and wide, and the tall *Evening Primrose* (*Oenothera Lamarckiana*) still holds its heads of wide-spread yellow blooms, and *Oxalis floribunda rosea* is yet bright with flower. *Pan-cratiun maritimum* I saw coming into bloom in a neighbouring garden the other day. In moist and partially shaded positions the *Tufted Pansies* have flowered through the entire month, and of the *Poppies*, the apricot-buff *Papaver pilosum*, the Iceland *Poppies* (*P. nudicaule*), and the Welsh *Poppies* (*Meconopsis cambrica*), though not profusely floriferous, have borne a good sprinkling of blossoms. The *Paris Daisies* have been covered with flower, and the Ivy-leaved *Pelargoniums* have been increasingly decorative. Of these, *Mme. Crousse* and *Souvenir de Charles Turner* are two of the most acceptable in colour, and in some instances may be seen trained for a distance of many feet up a cliff-face or house wall, where they create a charming effect when in full flower. During the past month I was afforded the opportunity of inspecting a collection of seedling Ivy-leaved *Pelargoniums* raised by an amateur in the neighbourhood, and amongst them saw a very perfect scarlet of good habit, producing large trusses of double blooms that should be of great value in the garden. At present the raiser holds the whole stock in his own hands. The herbaceous *Phloxes* were very ornamental in the early days of August when growing in deep, rich soil and afforded an early summer mulching of well-rotted manure, but in poor, shallow soil these subjects are sorry spectacles in a dry summer. *Phygellus capensis* has borne its tall spikes of pendent scarlet blossoms, and the *Winter Cherry* (*Physalis Alkekengi*) and its newer and larger form, *P. Franchetti*, are already showing colour in their calyces. *Plumbago capensis*, a large plant of which has lived in the open for several winters against a cliff-side sheltered from the north and east, is covered with its pale blue flower-clusters, while in the rockwork *P. Larpentæ* is bearing its blossoms of a deeper blue. *Polygonum capitatum* and *P. vacciniifolium* have been in bloom, and towards the end of the month *Pyrethrum uliginosum* expanded the first of its narrow-rayed, white star flowers. The old double white *Rockets* were in bloom early in August, and *Rudbeckia Newmanii* and *R. purpurea* came into flower before the month was many days old. A fair sprinkling of *Tea and China Roses* have been available throughout the month, and the single white *Macartney Rose* has daily expanded a fresh instalment of fair blossoms. The *Salpiglossis* in its varied shot-silk hues has nobly sustained its position as one of the most decorative of our garden annuals, and the deep *Gentian-blue* of *Salvia patens*, so telling when employed in masses, has again proved so valuable as to justify the making of an exception in the case of this plant by utilising in the herbaceous border a subject that stands in need of winter removal and shelter. *S. coccinea* and *S. fulgens* are both in flower, and have passed through the last three winters unscathed. Late seedlings of *Scabiosa caucasica* are in flower, and the bloom-clusters of *Sedum Sieboldii* are gathering colour, while *Senecio pulcher* and the *Golden Rod* (*Solidago ambigua*) are in bloom, and *Statice latifolia* is bearing its branching

flower-sprays of minute lavender blossoms. In a sheltered spot *Sparmannia africana* is blooming, and late-sown Sweet Peas are still bright with flower. The *Tigridias* have made a gorgeous display with their great Orchid-like blossoms of scarlet, rose, yellow, and white, marvellously mottled at the bases of their petals, whose splendour seemed a fitting sequel to the tropical effulgence of the sunshine. *Tradescantia virginica* still produces its blooms of violet or white, and brilliant effects are created by beds of *Verbena*s and scarlet *Zinnias*. Some of the *Yucca*s have also commenced to blossom, and *Zauschneria californica* is becoming scarlet with flower.

S. W. F.

KITCHEN GARDEN.

EARLY TOMATOES.

FOR some years I relied upon cuttings struck in September for the early supplies, but at times the plants failed, as with dull weather and fogs I found the rooted cuttings wintered badly, no matter what variety was grown. Of late years I have obtained much better results by growing from seed sown now or earlier. I am not in favour of sowing too early, as a large plant is not necessary. It is somewhat late for sowing, but there is ample time if two or three seeds are put into a pot and when well above the soil the weaker seedlings removed, leaving only the strongest. This is a great saving of time, as the potting-off out of seed-pans gives a check. Provided there is ample time, I like to grow my plants in cold frames from the start. There is no harm done in starting the seed in a warm place, removing to a cold frame near the glass. When ready to be potted off into 6-inch pots, the sashes may be left off the plants at night; they will benefit by the night dews. In potting up at the start I would advise a liberal compost, as growth must be made in a short time. Bone-meal mixed with good loam and some wood ashes is an excellent compost, as this favours root-action and a short-jointed growth. After potting it is necessary to keep the plants close for a few days. Fruit is not wanted before the new year, as though a few will set at the base of the plants during October, they will not make much progress. These fruits will be acceptable the next spring, as when the plants are planted out or potted into their fruiting pots early in the new year they will swell and mature quickly. Six-inch pots will be large enough to winter the plants in, but there is no gain in crippling them, and I do not hesitate to give a small shift in October if the plants need it. The plants are removed from the cold frames at the end of October or early in November and placed on shelves near the glass, and all the ventilation given in favourable weather. Here they will be forming their trusses, and, though sturdy, they will be much superior to plants from cuttings. Early in January they are placed in their fruiting quarters. I both plant out and grow in pots. From pot plants I get the earliest fruits, but those planted out yield the heaviest crop. I have one house of each. The pits are low structures and hold two dozen plants at the front of the house. They are trained up the rafter within 9 inches of the glass. It is necessary to set the flowers early in the year. I advise a low night temperature—not more than 60°—with plenty of air in fine weather. In planting out very little soil is needed, as I top-dress after the first fruits that form in the new year begin to swell. Early kinds such as *Conqueror*, *Conference*, or a good selection of the *Old Red* set better than the large smooth-fruited kinds.

G. WYTHES.

Pea Autocrat.—Besides being one of the finest flavoured Peas in existence, this variety has the merit of flowering and bearing continuously, as pods are produced quite low down on the haulm as well as higher up. The colour when cooked is a very bright green, and, taking all its good points into consideration, I am very doubt-

ful if there is such another in cultivation. If there is, I should like to hear of it. Not only is it useful for late work, but sown in March it gives grand gatherings in July and early in August. I like it better every season, and have largely increased the quantity sown this year.

Thinning autumn-sown Onions.—Where several sowings of Tripoli Onions are made, the earliest lot of such varieties as *The Queen*, *White Lisbon* and *Leviathan*, the latter the largest of the white section, will soon be ready for partial thinning. The sooner this is performed when once the seedlings are large enough the better. Some gardeners wisely sow a row or two extra for use in the salad bowl, as then the main batch can be thinned to an inch apart at the second and final autumn thinning. If the ground is dry and hard a good soaking of water should be given the day previous, and, although by no means a common practice, I have found mulching between the rows even at this early date an excellent practice. Moisture, either from rains or artificial waterings, is thus retained, and the plants become sufficiently sturdy to withstand a sharp winter. A gross growth is undesirable, as frost soon cripples it, and on that account those who make several sowings, and if possible in different positions, reap the benefit of the extra labour incurred by preserving at least one batch. Especially is this so where the ground is rich. Give another moderate broadcast sprinkling of soot, and afterwards use the Dutch hoe to work it in beneath the surface.

—N.

Storing Onions.—If any Tripoli Onions, intended either for cooking or for seed, are still lying exposed on the open ground, let them be removed to a dry, cool store at once, as they lose much of their solidity and quality by too long exposure to wind and sun. In southern localities the earliest lots of spring-sown Onions will soon be fit for harvesting. Where the quantity is not large it is a good plan to place the bulbs in large flat hampers, which allow of their being easily removed under cover in case of rain. When allowed to remain on the plot until stored, the bulbs should be moved occasionally. My plan is first of all to throw the bulbs from one half the plot on to the other, then clean off all weeds, afterwards serving the other half in a similar manner, and finally spreading the Onions equally over the whole area. This is far better than leaving them among weeds and rubbish, which hold the dew and moisture, preventing a free circulation of sun and air among the bulbs. Any thick-necked or otherwise deformed bulbs must be stored separately to be used quickly. When stored, the best shaped bulbs, if wanted for seed, should be strung on ropes in the old-fashioned way and suspended from the roof of a cool, dry shed or out-house, a little frost being beneficial rather than otherwise.

—B.

Carrots.—I regret to observe so much encouragement given to very long Carrots at vegetable shows. But the other day at the great show at the Crystal Palace the well-known Long Surrey, but, of course, under some other appellation, roots fully 18 inches to 20 inches long, because they had such long, thin, and utterly useless tails, had classes to themselves and were awarded prizes in proportion to their length apparently. I find such classes elsewhere, and think they are very undesirable. These very long Carrots are very wasteful, because so large a portion of the roots are uneatable. What good results from encouraging the growth of such things? In the same way Parsnips are more regarded for inordinate length of tail than for fleshiness of shoulder, the very best portion of the root. When we have in Carrots such superb fleshy roots as are furnished by *Nantes*, *Favourite*, *Champion*, and *Intermediate*, roots if not coarsely grown that are all soft succulent flesh, why favour long woody roots that are not one half so good? Some of what are described as Improved *Intermediate* stocks are too large. They have been grown on yearly from the largest, though doubtless handsome roots. But no large Carrots are so good for table as are smaller ones. No doubt cut up small

they do very well for flavouring soups or the stock-pot, but no gardener would send his largest roots to his employer's table. He knows that no Carrots are so much appreciated as those comparatively small and quite young. Hence the most delicious roots of all are the early Short-horns pulled small and cooked whole, also in the winter smallish roots from a July sowing of some one of the blunt-rooted or Intermediate varieties. There is yet much room for Carrot improvement, both as an exhibition and an edible product. We want in the stocks not so much of size, but more refinement, bright, clear, rich colour, perfect smoothness, and very soft, succulent flesh. These are points that in judging need to be emphasised.

—A. D.

GARDEN FLORA.

PLATE 1240.

TWO DUTCH DAFFODILS.

(WITH A COLOURED PLATE OF N. MME. DE GRAAFF AND N. APRICOT.*)

THE two Daffodils represented in the coloured plate are both very remarkable in different ways, and were originally raised from seed at Leyden, Holland, in the well-known bulb nurseries of M. de Graaff, as also was the great yellow Glory of Leyden and many other good kinds. I happened to be at Leyden in April, 1883, when the first bloom of Mme. de Graaff opened, and saw at once that it marked an epoch in the seedling history of white Daffodils, and I believe that even to-day there is nothing quite so chaste and shapely in the white-flowered section to which it belongs. Its size and the peculiar rolled-back margin of the pale sulphur trumpet are well shown in the illustration. To my mind, it is in purity and in form a point or two ahead of *Weardale Perfection*, though not quite so large as that variety. N. Mme. de Graaff and *Glory of Leyden* were originally offered at £7 10s. the pair, i.e., one bulb of each, and most of those who bought at that price found the investment a profitable one, both being good growers and the present-day prices being remunerative. Mme. de Graaff has appeared in most of the winning stands at the *Narcissus* shows of the past ten years or so and has been certificated by the Royal Horticultural Society's *Narcissus* committee and also at Birmingham. Its exact parentage is unknown, but from its characters one may assume that it came from *N. albicans* (*Dutch moschatus*) and some one of the bicolor forms.

The second variety on the plate, N. Apricot, is of more recent origin, having attracted public notice only in 1898 when exhibited for the first time. It is most remarkable for the peculiar coloration of its trumpet, and it is thought may ultimately prove to be the forerunner of a new section of Daffodils having more or less red in the corona. An old white variety called Mrs. Thompson sometimes shows a trace of colour in this way, and even old flowers of the wild *N. moschatus* of the Pyrenees now and then die off with pale rosy trumpets. The Rev. G. H. Engleheart has raised seedlings, especially in the *Leeds* or *Incomparable* sections, which possess exquisite rosy salmon or apricot shades in their cups, but this seedling of M. de Graaff's is, so far as I know, the first seedling Daffodil in which the tendency to a suffusion of red in the trumpet is absolute certainty. In size and form Apricot is behind many other older kinds, but it will always be looked upon as the first real advance towards the red

* Drawn for THE GARDEN by H. G. Moon from flowers sent by M. de Graaff, Leyden, Holland. Lithographed and printed by J. L. Goffart.



trumpeted Daffodils that have often been predicted as future possibilities.

F. W. BURRIDGE.

BELLADONNA LILY AND PERUVIAN SWAMP LILY.

THE charming picture herewith gives a phase of gardening at once among the most beautiful, if the least frequently seen. It is, however, so simple in itself and so easy of imitation, that such displays, instead of being regarded as somewhat rare, should be of the most frequent occurrence in those gardens where hardy subjects find a more or less congenial home. Narrow borders, as shown in the picture, are frequent in gardens, and especially so, as in the present instance, where greenhouses are devoted to the cultivation of tropical or sub-tropical plants. In certain instances the latter, therefore, call into existence in some gardens not a few plants whose perfect hardiness in times of severe frost is open to doubt. But even without the latter there is scarcely a garden worthy the name in which a suitable position for the plants indicated could not be found. The base of a wall having a south aspect will be the main thing that is required from a cultural point of view and so far as position alone is concerned. It is, however, a point in its favour when

such a position may be found within the limits of the flower garden. This will save such beautiful subjects being relegated to the vicinity of the kitchen garden, a position where at flowering time they would be much less seen. The leafless character of the Belladonna Lily at flowering time may from an artistic point of view be in the nature of a drawback when it is planted entirely alone. In the present instance, however, we see a good deal in a small space. A narrow border, less than 2 feet wide, it yet contains a couple of very beautiful hardy flowering bulbous plants, each of which is exactly suited to the environment of the other. It is an excellent object-lesson on the one hand, while it also displays a *multum in parvo* style of gardening on the other. Surely it was no haphazard idea that caused so pretty and so useful a foil to the leafless stems of the taller Amaryllid to be planted in the foreground. The result is an extremely pretty one. The value of such an arrangement is enhanced by the manner in which the wall is furnished. In all this the value of these beautiful illustrations is apparent, displaying as they do in detail what is either impossible or all too inadequately expressed in words. Of the plants themselves a few remarks will suffice. The Belladonna Lily is without doubt one of the most handsome of hardy bulbs, while its freedom to flower when the bulbs have become established is almost proverbial. Once planted, this handsome subject is best when left entirely alone. This is not merely true of it for a year or two, but for a dozen years, provided the position be a good one and the bulbs thoroughly well planted in the first instance. Old plantations will, however, be greatly benefited by a mulch of decayed manure each year. This is best given immediately on the decay of the flower-stems, the object being to strengthen the ensuing growth. Select a warm, sunny position at the foot of a south wall, and clear out the

original soil for at least 2 feet deep. This is best done in a deep, wide trench, and one 18 inches wide will be ample. How much or how little preparation of the soil is needed will largely depend on the condition and quality of the original soil. What is preferred by the bulbs intended for planting is a good sandy loam to which plenty of decayed leaf-soil and some well-decomposed manure may be added. Where a sandy soil naturally exists, the addition of leaf-soil and river grit or mortar rubbish will suffice, at the same time enriching the whole. Where clay soil is the staple, it may be advisable to descend 6 inches deeper in the trench with a view of inserting ample drainage, this to be covered with rough turf and made firm. Briefly, with plenty of good sandy, holding loam and rotten cow manure, these things may be grown to perfection. In making a new border for such things, it will be found best to give an advance order for the bulbs, as it is not usual for bulb dealers to lay in large supplies unless previously ordered. Where good dry roots are obtainable, such may be planted over a somewhat extended season. The safest time, however, is with the decay of the foliage, and a special order to this effect will secure the bulbs for planting within reasonable limits. Bulbs of these things may sometimes be seen in the dry state—too dry, unfortunately—so late as December



Belladonna Lily and Zephyranthes in a warm border at Kew.

and January, and because of the large size are regarded as fine. If put to the test, however, it is highly probable such bulbs, compared with the time when lifted, would be greatly diminished in weight. In the former month the established roots are breaking into leaf, and with a mild season make good headway in the early part of the year. When occasion arises, these bulbs may be transplanted from established quarters in June or early in July. Firm planting is always necessary, and equally so rather deep planting, that is, keeping the entire bulb below the surface. In seasons of great heat and drought a thorough deluging of water may be given the first week in August just before the flowering spikes break the soil. The other plant shown in the front of the picture, *Zephyranthes candida* (Peruvian Swamp Lily), otherwise known as *Amaryllis candida*, is a native of Buenos Ayres. This is an evergreen species, or nearly so, the pretty white Crocus-like blossoms appearing in plenty during the early autumn months. A closely-allied species is the *Atamasco Lily* (*Z. Atamasco*). This flowers in spring, and has somewhat channelled leaves, while *Z. candida* has decidedly flat surfaces to its leaves, the latter also very polished and smooth. Both kinds increase rapidly by offsets. Too

frequently, however, the position and soil afforded are too dry for their requirements, and a decidedly moister and heavier soil would give better results. In very sandy soils these are not always a success, but in rather heavy loam or clayey loam are more successful. For forming edgings these are well suited, and the former in conjunction with the lovely Belladonna Lily makes a very delightful picture in any garden. The pretty group in the photograph was for a long time an attraction in the Royal Gardens, Kew, during the autumn of 1898. A very congenial home, judging by the results attained, has been found for these handsome late summer and autumn flowers beside the wall of the Orchid house. The profusion of spikes from some of the larger bulbs, the offsets of which have now obviously increased to flowering size, is remarkable.

E. J.

THE WEEK'S WORK.

KITCHEN GARDEN.

PLANTS IN FRAMES.—Success or otherwise in frame culture largely depends on the way in which the beds are prepared for their reception in October. When either Cauliflowers, Cabbage, or Lettuce are planted in light soil of considerable depth, lifting is invariably attended with much ball-breaking, many of the most useful fibres being destroyed, the check occasioned ending in premature hearting in or running to seed. The best way is to place a shallow frame on quite a hard bottom of coal ashes, covering this with a layer of rotten manure, and finally laying on from 6 inches to 8 inches of loamy compost, making it firm when in a semi-dry condition. From such quarters the plants if not too thickly planted will lift with good balls, a portion of the underlying manure clinging to them. The frames being ready, leave the lights off day and night to get the soil well moistened. Previous to planting make all very firm. This early preparation for frame plants is advantageous, as when they are picked out into a newly-made loose root-run a greater check is given than when such is firm and settled by a week or two's standing.

EARLY PEA BORDERS.—It may seem full early to speak of these yet, but as in all large gardens work is always too plentiful after frost sets in, it is well to take advantage of a slack period to prepare any early borders—at least where Peas are sown in November. If these borders have not a natural fall towards the pathway, success in early Pea culture will be made more certain by adding friable soil in such quantities as will not only produce that, but secure also perfect drainage. Burnt refuse, potting-shed refuse, and the sweepings of walks are all suitable for the purpose.

WINTER CUCUMBERS.—If former directions have been carried out, plants for winter fruiting will now be fit for planting out. Providing the house has been well cleansed, no fear need be entertained of attacks from red spider—at any rate before the plants become well established. If the house is well furnished with hot-water pipes, all that will be needed is to three parts fill the bed or pit with good sound leaves, firm them well, and surmounting them with mounds composed of good fibrous loam, rather light in texture than otherwise, a free addition of fresh horse droppings, and some old mortar rubble, the latter securing a free escape of superfluous water from the roots. Do not place manure beneath the roots at this season. Small mounds will suffice to start with, as these can be easily enlarged as the plants increase in growth and emit new fibrous roots. Place a neat stick to each and water home, preserving a rather close atmosphere for a time and syringing the foliage twice daily in sunny weather, closing the house at 2 p.m. and well damping walls and pathways. Where evaporating pans exist it is a good plan to fill them with diluted

farmyard liquid manure, the ammonia arising from this not only assisting growth, but acting as a check to red spider. The laterals which form between the bed and the lowermost wire of the trellis must be pinched back to the second leaf.

JANUARY FRUITERS.—Seed may now be sown where house-room is at command for a successional batch of plants for fruiting during January and February. Sion House, Telegraph, and Cardiff Castle are all good sorts, and as soon as the young seedlings appear raise the pots well up to the roof-glass and in a position free from draught. Use great care in watering, as the base of the stems sometimes cankers at the time of year.

TOMATOES FOR WINTER.—Where these have been growing in frames or pits, removal to comfortable quarters must now take place. This is necessary not only to hasten on the crop, but to ward off mildew, which is apt to come on as the nights get cooler. Where 6-inch pots have become well filled with roots, a shift must now be given into the fruiting size, the most suitable being those 10 inches in diameter. Drain them well and add plenty of opening material to the soil, pot firmly and give the plants a position near to the glass. Supply atmospheric moisture by means of sprinkled floors and walls, rather than by overhead syringings, and give air liberally, avoiding front air after the end of October, as this is liable to produce mildew. Use clear water only until the crop is set, except in the case of any weakly plants, which may have a little assistance two or three times a week. Remove all side growths and train on the one-rod system. J. C.

FRUITS UNDER GLASS.

LATE GRAPES.—With me there has been a perfect plague of bluebottle flies, which together with wasps are calculated to do a great deal of damage to hanging Grapes and have to be circumvented in some manner. I do not find that the wasp destroyers sold have any effect on the flies, and I have had to go to the old-fashioned plan of hanging wide-mouthed bottles partially filled with beer and sugar among the Vines. In this way I have trapped many hundreds, but there has been no very appreciable lessening of the number that infest the houses, and we shall probably have to wait for colder weather to clear them off, the only available way of preventing them being to cover the ventilators and all openings with hexagon netting, which is effective, except in houses where the glass does not fit close at the laps. As a note of warning, I may say that at one end of a long range of vineries the outer walls are covered with Ivy, and it is in the houses at this end that we are most pestered with the flies; indeed, at the other end there are very few indeed. The great attraction which Ivy has for flies at this time of the year should prevent any being planted near the fruit houses. Some years ago I had a similar trouble in a place where the Muscat house was only separated from an Ivy hedge by a narrow walk, and during the autumn we had a great deal of trouble to save the Grapes. Covering the ventilators with netting is an evil, as it prevents the free circulation of air so necessary to prevent damping, but it is greatly to be preferred to the system of enclosing each bunch in a muslin bag, as one has the bunches directly under one's eye and anything wrong with the berries can be easily detected, while there is also the advantage of preserving the bloom on the Grapes, which bagging tends to destroy. For the present it will be necessary to try and preserve the driest possible atmosphere about the Grapes without much use of fire-heat (except in the case of any Grapes not yet ripened), and all damping down or swilling out of the houses should be entirely suspended, a dry brush through daily being sufficient to preserve tidiness. Dropped leaves should be removed daily and a few of those turning yellow may be taken off, leaving the stems to drop; a final look over, too, should be given to remove any sub-lateral growth, as any of this would be superfluous now, and would attract and hold condensed moisture where the

Vines are thick. All hanging Grapes should be carefully looked over for bad berries twice a week at least, and this is specially important where the pests alluded to above have managed to establish a footing, as one injured berry left on for a few days will spread decay to three or four others and create a disfiguring gap in the bunch.

EARLIER HOUSES.—As these are cleared of fruit they should have the ventilators thrown wide open and left open day and night, a free circulation of air being conducive to ripening the canes in a natural manner, preserving a healthy tone in the Vines. A splendid opportunity is afforded of helping the winter cleaning by heavily hosing or syringing the Vines frequently now, say once a week. Hot water, up to 120°, in which a little soft soap has been dissolved is one of the finest things that can be used, and will dislodge if not kill bugs and many other insects. Those who depend on a winter dressing alone generally get their Vines pestered with insects before they have done their season's work, and this is only natural, for the insects or their spawn find secure resting-places in various crevices long before winter comes on, and it is then difficult if not impossible to reach them. Now as they spend their time in more open quarters from which there is no difficulty in dislodging them, the chances are all in favour of destroying them entirely by removing later on an inch or so of the surface of the border on which they will have dropped. The autumn is by far the best time too to renew any borders that may require it, and where the houses are not to be used for storing Chrysanthemums, the sooner the work is taken in hand the better it will be, but I should prefer leaving it until the Chrysanthemums are over rather than to stand these on a new-made border. Cut flowers are such an important item now-a-days, that one has to sacrifice some of one's most cherished tenets in order to meet the present demands. Those who are in the fortunate position of having plenty of room for plants, without encroaching on the vineries, should commence at once the renewal of borders. The quality of soil used should govern the amount of porous material, but in no case should the latter be so limited as to prevent a quick drainage of the border after watering, as the possibility of frequent waterings during the growing season goes a long way to produce high quality fruits, and where the soil is very heavy in itself, and not well lightened, frequent waterings are impossible. In relaying the roots every endeavour should be made to render the soil about them very firm; this requires care to prevent injury to the roots themselves, but is imperative for the formation of wood of the right sort. Loose and rich borders are frequently responsible for over-grossness and softness of the wood, and such wood can never be satisfactory.

PINES.—Cooler nights and less sunshine now to be expected will necessitate a sharp look out being kept to see that both bottom and top heat are well kept up. The laxity of the summer months is often continued too long, with the result that plants get chilled and the roots inactive, a state from which it is difficult to move them. Early closing of the houses and husbanding the sun-heat will do much good, but, the nights being longer, too much dependence must not be placed on this, and it is, of course, useless as regards any action on the roots which must be kept warm by other means, either by fire-heat—by far the best method—or by fermenting material. The latter gives a good deal of trouble, and Pine-growing under such circumstances is not by any means pleasant work, for one must be always on the watch and ready to add fresh tan to the beds whenever there are indications of a lowered temperature. With young stock growing in pits that can only be worked by lifting off the lights, favourable opportunities when the weather is warm and fine must be chosen for such renewals. Continue to give manure water to plants swelling off their fruits, and clear soot water to younger stock when water is needed, but the water-pot must now be used with increased caution, as the plants will not

assimilate so much water as they have been taking during the summer; plants carrying fruits which are changing colour should now be allowed to get quite dry.

POT STRAWBERRIES.—By this time early layered plants potted up when advised should have filled or almost filled their pots with roots, and where this is the case, the crowns will be strengthened by feeding with manure water given alternately with clear soot water for the next month or five weeks. I do not advise this except in the case of well-rooted plants, for giving manure water to soil that is not well filled with roots does more harm than good by turning it sour. If the plants have grown so that they overlap each other, they should be stowed further apart at once, as crowding is bad for them, and I always set mine out at a good distance from each other directly they have got over the check of potting, so that no further moving, except to prevent rooting through, is needed until plunging time comes.

CORNUBIAN.

FRUIT AND VEGETABLE CROPS.

EASTERN.

Abney House, Bourne End.—Wall fruit very scarce; all the choice kinds, such as Apricots, Peaches, Nectarines, and Figs, quite a failure. Bush fruit in enclosed gardens is good, but in the open market gardens only half a crop, owing to the late spring frosts. Strawberries are a fair crop, but soon over owing to the excessive heat; Pears about half a crop; Cherries very plentiful; Apples a full crop.

Vegetables on the whole are very good considering the late spell of drought. Late Potatoes look very promising. Early Peas have been very fine, especially Early Giant, which is the best early Pea I have ever grown. Later varieties in some gardens are suffering from an attack of thrips.—J. G. GOODMAN.

Coldham Hall, Bury St. Edmunds.—The Apple and Pear crops in this garden are decidedly bad. I have never had so short a supply, and in a great measure I attribute this to the hot, dry autumn. Unless abundant rain falls when the trees are perfecting their growth and fruit buds, the latter are never properly developed, and I anticipated this state of things during the dry period complained of. Again, I never knew sparrows to attack fruit blossoms so persistently as during the present spring. Cherry and Pear trees were almost cleared of the buds where not netted, and this, of course, has made matters worse. The late frosts entirely spoiled the flowers on all the wall trees except one old Nectarine growing on the house. A few of the Codlin type of Apples will bear a small quantity of fruit, Hawthornden, Irish Peach, and a few more young trees have some fine promising fruit upon them, but out of some hundred or so of young, healthy trees there will not be a bushel of fruit. In some neighbouring gardens it is not quite so bad, but the crop, I fear, is a very long way below the average. Of Cherries, May Duke and Elton are the best. Strawberries have been a very fine crop and extended over a fairly long season. Every year increases my good opinion of that fine late variety Dr. Hogg, and I could now (July 20) gather dishes fit for exhibition. Latest of All is also fine, but the flavour is not nearly so good as that of Dr. Hogg. It has ripened to the points much better than usual. Royal Sovereign, Monarch, and Leader have been badly attacked by insects. Raspberries are an excellent crop; Currants distinctly good; and Gooseberries, perhaps, the finest crop of the year. I have never had such splendid berries of the large richly flavoured kinds, which are ripening fast now. Under glass, crops, on the whole, are very favourable, but a bad attack of bud-dropping in the early Peach house thinned the crop on Waterloo and one or two others. The second early varieties are just getting over and have been magnificent. Early Rivers Nectarine

amply deserves the great praise that has been bestowed upon it, and has proved itself a boon to those who require choice fruit in abundance. Grapes have been and are very good, young Vines planted last season having produced splendid crops. Melons are not doing so well as usual.

Vegetables are on the whole very good indeed. The cold spring delayed early gatherings of small crops, and, followed by a short and sharp period of drought, checked the early crops of Peas. Afterwards rain fell in plenty, and the second early and midseason crops were excellent. Late rows look very well. Potatoes have been very good up till now, but disease has necessitated lifting several kinds rather before their time. Late Potatoes were looking well, but the tropical weather of the last few weeks will probably cause the field crop to be small. There is yet time to save them if rain comes, but the sky is like brass and so is the soil, the heat being almost unbearable. Luckily, I was able to get the winter greens of various kinds planted early and they have never looked back; now they also want rain badly. Onions, Parsnips, Carrots and Beet were never better, and salads of all kinds have been abundant and good. The autumn-sown Onions have been very much better than usual this year, not a single plant having bolted out of many hundreds. No difference can be noticed in the rows that were transplanted and those that were thinned in the seed drills.—H. R. RICHARDS.

MIDLAND.

Alton Towers, Stoke-on-Trent.—The fruit crop is very satisfactory in this district. Most kinds set well, and there is every appearance of a heavy crop. Apples are very plentiful and are swelling fast. The best cropped varieties are Lord Suffield, Lord Grosvenor, Ecklinville, Bramley's Seedling, Stirling Castle, Grenadier, Ribston, and King of the Pippins. Pears are rather patchy, the best being Marie Louise, Glou Morceau, and Louise Bonne of Jersey. Small fruits are good, Strawberries exceptionally so. Royal Sovereign was excellent, carrying an enormous crop of large fruit of first-class quality. Cherries are better than they have been for some years. Some varieties of Plums are very fair on walls, while bush and orchard trees are quite a failure. Damsons vary, some trees bearing well, and others just a sprinkling or none at all. Nuts are very scarce about here.

Vegetable crops are fairly good on the whole, but early Potatoes are very late and small in this district, owing to the drought we experienced in June, and the check given them has in many instances caused the young tubers to sprout when the rain came; this is especially so in light and shallow soils.—E. GILMAN.

Bradgate Park, Leicester.—Apples, Pears, and all stone fruits are very light and below the average. Bush fruits are good. Strawberries are neither so good nor so heavy a crop as last year, but the fruit is finer and of good flavour and later.

The vegetable crops are very good, and have much improved since the recent rain.—G. H. PARRATT.

Barkby Hall, near Leicester.—Most kinds of fruit are scarce in this neighbourhood, owing to sharp frosts at the time of blossoming. We had 11° of frost, which also killed most of the young Gooseberries which were not sheltered by top fruit trees. Apples are very scarce. Trees on high ground in exposed positions have good crops in some cases, while those in low-lying places and somewhat sheltered have very light crops. Pears are almost a failure. We have a fair crop on the walls, which were all covered with three thicknesses of fish-netting, but a great number of the blooms were destroyed. Plums are also a failure on standard trees. Those on walls have a fair crop here. Apricots are very light. Those that were close to the wall were saved. Peaches are almost a failure: Cherries a good average crop. I cannot account for these escaping so well.

Gooseberries are very light in the open, but good under trees. Currants did not suffer quite so much as Gooseberries. There is a fair crop of Red, but Black Currants are very light. Raspberries are a good crop, although the first blooms were destroyed. Of Strawberries the crop was only moderate. Royal Sovereign, being early, suffered more than the later ones. Latest of All was not in flower, and the crop has been heavy and good.

Potatoes were all cut down by the frost and the tubers are small. Early Cabbages did not run to seed so much as usual and were good. Onions and Carrots are good. Peas have not done quite so well.—J. LANSDALE.

Catton Hall, Burton-on-Trent.—Fruit crops in this garden and neighbourhood, if not up to some of the best seasons, are generally good. Apples in following varieties on standard trees are a full crop: Alfriston, Blenheim Pippin, Golden Noble, Maltster, Domino, Gravenstein, Lord Suffield, Greenup's Pippin, Lane's Prince Albert, Irish Peach, Worcester Pearmain, and King of the Pippins. Bush trees, of which we have many, are indifferent. Only Potts' Seedling, Grenadier, Bismarck, Beauty of Bath, and Stirling Castle carry full crops. Pears are a failure, Beurré Diel being the only variety having anything like a crop. We have some fine bush trees which invariably carry grand crops. Plums and Damsons are a partial failure; the same applies to Peaches. The latter are clean, and have been no trouble compared with other seasons. Apricots are about half a crop. Currants, Gooseberries, Raspberries, and Strawberries are all good and abundant. Royal Sovereign, I think, is the best Strawberry sent out for years, and ranks with President for usefulness. Dr. Hogg from one-year-old plants is generally very fine here. There are few good orchards in this neighbourhood. Apples and Pears (the latter poorly represented) are carrying good crops; old trees of Blenheim are carrying by far the best crops.

The dry weather has checked all vegetable crops. Potatoes, I think, will yield fairly well. The rains in May and June were a great help, but the excessive heat has entirely dried up the moisture, and on light soils the tubers will be under-sized, but should, owing to rains coming later, be better than last year. There were many diseased tubers in early sorts. I have found none, however, in lifting a patch of Windsor Castle.—W. J. NOVELL.

Shipley Hall, Derby.—This is far from a good district for outdoor fruits, and the report from the neighbourhood must be a meagre one. In the orchards Apples are cropping very irregularly, more than half the trees being barren and only a few have a heavy crop, the individual fruits promising to be but small. On espaliers in the garden things are better; one or two early varieties, such as Lord Suffield and Warner's King, are heavily cropped and the fruits fine. Pears, on the other hand, are best on orchard trees and very scarce on wall trees, but I do not imagine that the former will come up well, though growth is free and the trees healthy, but we lie too long in the lap of winter to expect good dessert Pears in the orchard. Neither Apricots, Peaches nor Nectarines are grown outside here. Plums and Damsons are but a poor crop, the scarcity being due to spring frosts, I imagine. Cherries, too, are very poor. Currants, Black and Red, are a good crop. Gooseberries grown in the open as bushes lost many fruits through frost, but cordon-trained trees under a wire protection are heavily cropped and promise very well. Medlars are a fair crop. Raspberries are the best crop of the year, and canes which have been treated to good soakings of manure water have borne fine fruits, which the dry weather now being experienced has allowed us to gather in good condition. Strawberries on young plants have been very good, Royal Sovereign and James Veitch both very fine. On older plants the fruits have been small, but plentiful, and Vicomtesse H. de Thury has provided excellent fruits for preserving.

Filberts are very scarce, but Walnuts are really well cropped in the district. Blackberries promise remarkably well and apparently grow well here, especially the Parsley-leaved.

Potatoes are very irregular in the fields. Other vegetables are good, Peas especially so. Brassicas are now growing well, but it was the worst seed-raising season I ever knew, the ground cold, deluged with heavy rain, and not a glimpse of sunshine through May until quite the end of the month, so that things started very slowly indeed. The earliest-sown Beet and Turnips bolted badly, but later sowings are better.—J. C. TALLACK.

The Gardens, Chatsworth.—Apples are only a moderate crop; Pears and Plums scarce; Cherries an average crop; Red and White Currants an average crop; Strawberries good crop and fine fruit; Raspberries and Black Currants moderate; Gooseberries under average.

Potatoes are a good crop, and no diseased ones at present. All kinds of vegetables are growing freely.—W. CHESTER.

ORCHARD AND FRUIT GARDEN.

NOTES ON STRAWBERRIES.

THERE seems very great unanimity among growers as to the shortness of the supply of Strawberries this season. "H. R." Suffolk, complains of slugs and of another enemy that takes the seeds from the surface of the fruit. Unless by mice, I have never had seeds eaten off the fruit in the manner described, so that there must be a new enemy in the field. Mice, unless promptly trapped, will quickly spoil a quantity of Strawberries by simply eating off the seeds, this rendering the fruiting useless for any purpose. Slugs are not alike troublesome every year; in some, particularly in wet summers, they are very numerous and destructive; in dry ones they are not so much in evidence. Millipedes, of which there is one kind very partial to Strawberries, are common in any kind of weather when the fruit is ripening. I quite agree with "H. R." that the kind of mulching or the time of its application makes no difference to slug interference. I cannot quite agree with "H. R." that "the longer the ground between the rows lies open the better, as the moisture caused by the litter is an attraction to slugs." In soils of medium or light tendencies there is a difficulty in keeping the plants growing, and even with mulching applied, the drought this season was so searching, that many crops either succumbed or had a very short existence. The mulching of Strawberries in such land requires to be done for a two-fold purpose if any useful return is expected. In heavy soil the case is different. Applied early it arrests evaporation and retains moisture for a period when the plants require more to sustain them, and are often supplied with less, at any rate, from natural sources. Grass, whether long or short, is very bad as a mulch. Both rot quickly, and the latter clings to the fruit and gives much trouble in cleaning it off the berries when gathered. In fresh litter from the stables there is some manure that gets washed in by rain, and when clean affords sufficient to keep the fruit untainted. I always make an effort to get the Strawberry plantations manured early every spring, and for this reason I had not noticed that unmulched plants when in bloom suffered less from the frost than others which had straw material around them. It is quite possible that it might be so, as "H. C. P." suggests, in a dry time, for the arrested moisture would be to a certain extent stored in the strawy mulch.

It has scarcely been a year when comparisons could be usefully made bearing on the merits of

new kinds. I have had Monarch and Leader growing side by side. The spring frost made the crop very light in both cases, but Monarch was so poor, that it has raised an unfavourable impression, and will only be retained in sufficient numbers for providing for future trials. Royal Sovereign does not maintain the high reputation it had everywhere. In soil which suits it there is no doubt it is a fine variety, but there is no soil that can be said to be suitable to every kind, and this is true of Royal Sovereign. With me there is both in yearling and older plants too much leafage, and in the former not sufficient protection to the flowers by reason of the length of stalk carrying the leaf beyond the flower trusses. As "H. C. P." points out, the crop was very late from the loss of the early flowers, and was rendered short from the same cause. There have been many cases where in point of size, quantity, and early or late supply the Strawberry crop has been a failure. Thanks mainly to Latest of All, the crop here has extended from June 23 to July 24, a more lengthened period than others in the neighbourhood have been favoured with. It is only by timely mulching that it has been obtained here, and without such aid I am quite sure the Strawberry crop would have been reduced in bulk and length of season very considerably curtailed. Not only did exposed soil become dry, but very hot, conditions that surface-rooting plants like Strawberries cannot endure long. As it was, great quantities of Strawberries failed to swell beyond the size of peas, and the loss to the market grower, whether it extended into scores of acres or measured only by perches, must have been considerable. My crop this season I estimate was less by two-thirds than that of last year from the same extent of ground. "H. C. P." notes the unfavourable effects of peat moss litter for mulching. I have had proof of its poisonous qualities for the land, and reports from others who have used it substantiate this. No doubt there are some soils which may benefit from its use for a time, but a continual use is sure to end badly. Unfortunately, the gardener has not always an independent opinion he can exercise in the case of manure supplied him, but is the victim of circumstances. In preparing for the planting of Strawberries it is well to bear in mind the time over which they are expected to remain without any manure placed beneath the surface to benefit the plants. Deep trenching does not benefit them much, but deep digging does, and so does a fairly good dressing of decayed manure well buried.

Wills.

Failure of Strawberries.—I read Mr. Groom's remarks on the above subject at p. 115, and agree that the main cause of barrenness which has been so general this season is the parching ordeal the plants passed through last summer when growth should have been vigorous. Gardeners in private establishments, having only a limited area planted with Strawberries, might prevent the collapse, at least of young plants, by timely and liberal mulching. After dry springs the moisture is permitted to escape from the ground before any mulch is applied. Then frequently the so-called mulch consists of a very thin layer of straw or litter, barely sufficient to keep the fruit clean, and quite incapable of preserving moisture about the roots. I have had good results, even on light porous soils, by applying a good thick mulch of short manure from the pig-yard in January. This, when washed clean, keeps the fruit free from dirt and the root-run remains cool and moist. Comparatively few gardeners think of thoroughly soaking their Strawberry plot previous to plant-

ing in August or of mulching the plants, yet both these operations pay. I have sometimes used spent Mushroom manure for the newly-planted stock, and at others rough leaf-mould. Anything of this nature answers well, and those who neglect the above apparently trifling details must expect neither sturdy fruiting plantations the following summer nor healthy early runners. Dealing with two or more year-old beds in hot dry summers is a more difficult matter, but much may be done by plan above referred to towards preserving vitality and ensuring profitable crops of fruit.—N. N.

RELIABLE EARLY APPLES.

IN spite of an unfavourable season, the weather from the time the trees were in flower till now being very trying, there are yet large quantities of Apples in the market, and many private gardens are also well supplied with them. This satisfactory state of affairs is largely due to the fact that fruit growers are now content to plant numerous trees of a few varieties only, and those thoroughly reliable croppers, instead of, as heretofore, a few trees each of many varieties, the greater portion of which cannot be relied upon. As far as early cooking Apples are concerned, we need not expect any improvement on the varieties already available, and it is in the direction of improving on the later

has been erroneously classed as a cooking and dessert variety, but I should describe it as a good cooking Apple only. Duchess of Oldenburg or Russian Transparent might be classed as a never-failing variety—at any rate, I have never known it to fail completely. As a rule the long and somewhat slender branches are so heavily laden with large fruit as to require support to keep them off the ground. It is an early-maturing, striped Apple, somewhat soft, therefore not a good traveller, and, though often sold for eating raw, is best in a cooked state.

Manks Codlin, of which an illustration is given, we find classed as an August and September Apple, but of this excellent, reliable variety the season may be said to also include July, October, and November, so early does the fruit cook well and so well does it keep after gathering. Owing to its heavy cropping tendency, large trees are rarely seen of Manks Codlin, the majority being somewhat compact and stunted in appearance. The fruit lays on more colour, is firmer and crisper than is the case with most other Codlins, and we sometimes find it used for dessert accordingly. It is really one of the best cooking Apples we have, half-grown fruit making good pies. Keswick Codlin still proves profitable, but is not much planted now-a-days for the simple



Apple Manks Codlin.

sorts that our pomologists should go to work. Since the introduction of several comparatively new varieties, the value of Early Julien has been much overlooked by the majority of planters, yet I am credibly informed by an experienced grower, buyer, and salesman that where this old variety succeeds no other Apple pays so well. It is the first fit for use, and though classed as a cooking Apple is not to be despised for eating. Unfortunately, it is not so generally reliable as other sorts that will be named. It should be first given a trial, and if it prove a fairly reliable bearer be planted on a large scale. The most profitable trees I have yet seen of this extra early variety were horizontally or espalier-trained in a palace garden, but I know where there are both standard and bush trees that prove nearly as reliable. Gathering can commence early in August, sometimes in July. Should White Transparent prove as generally reliable as it does in the few instances which have come under my notice, a great future is before it. Both bush trees and pyramids crop very heavily, and doubtless standards will prove equally productive. The fruit is large, with a clear pale greenish yellow skin, and the first gatherings, taking the form of thinning out, may be made with advantage in July. It

reason that, good as this old favourite may be, there are other Codlins more reliable. Lord Suffield is a grand Apple where it thrives, but it is not nearly so reliable as either Lord Grosvenor or Grenadier, both of which possess better constitutions and produce very heavy crops of large Codlin-shaped fruit somewhat more ribbed than is the case with Lord Suffield. Potts' Seedling, another of these robust Codlin Apples, is equally reliable as regards bearing, and if the thinning is timely the fruit becomes larger than Lord Suffield even. From what I have seen and know of Gold Medal, this is a fine companion for Pott's Seedling, these two forming a good natural succession to Lord Grosvenor and Grenadier.

The Apple of this, and in fact most years, does not, however, belong to the Codlin section. In Stirling Castle we have the most generally reliable Apple in cultivation. This belongs more to the Hawthornden type, possessing all the good qualities of the old Hawthornden and none of its bad ones. Trees, principally on low stems, are to be seen of Stirling Castle in all directions literally breaking down with medium-sized, well-formed, clear-skinned fruit, which may be used direct from the trees or stored for a few weeks. For small gardens this

variety is invaluable. What about Ecklinville Seedling? some of my readers will ask, and in anticipation I admit that this is undoubtedly a most reliable variety, but, all things considered, it is inferior to Stirling Castle. It forms a larger tree in most positions, but it is not so heavy cropping nor is the fruit so valuable either for market or for temporary storing. In the Spitalfields Market, where immense quantities of early Apples are sold, Ecklinville, Duchess of Oldenburg and other soft, bad travelling varieties are known as Jews' Apples, owing to their being largely bought at lower rates by Jewish dealers.

W. IGGULDEN.

EARLY AND LATE GRAPES.

WOULD you kindly give me advice as to what Vines to plant in early and late vineries, each 25 feet long? There are inside and outside borders. The flavour is the first consideration.—J. R.

“J. R.” Although “J. R.” states that flavour of Grapes is to be the first consideration, I venture to think he means that only varieties of good quality are wanted. Some of the most pleasingly flavoured Grapes are most insignificant in appearance, and very few gardeners can afford to devote space to them. It is possible to have Grapes both richly and pleasantly flavoured and also of imposing appearance, such as most employers like to have on their tables. Supposing the houses are lean-to in form, eight or, at the most, nine Vines or fruiting rods are ample for each. In the earliest compartment I would plant three Muscat of Alexandria, one Muscat Hamburg, two Black Hamburg, one Madresfield Court, and one Foster's Seedling. In the late house room should be found for three Muscat of Alexandria, one Mrs. Pince's Black Muscat, one Alicante, one Lady Downe's, one Gros Colman, and either Gros Guillaume or Appley Towers. As this may appear to be a somewhat mixed or uncommon arrangement, I will give my reasons for including so many varieties and also for introducing Muscat of Alexandria into each house.

According to my experience, several varieties of Grapes are somewhat fickle. Only when the conditions are favourable do they succeed well, setting their berries, colouring satisfactorily, and ripening to perfection. For instance, in some positions Muscat Hamburg rarely fails to produce a full crop of bunches perfect as regards set and colour of berry, while the quality surpasses that of any other Muscat-flavoured Grape. Under different conditions as regards soil and climate the greatest difficulty is experienced in producing a single good bunch. Either the berries fail to set or wholesale shanking takes place and the variety is an utter failure. Much the same remarks apply to Mrs. Pince's Muscat. By some gardeners it is considered the best late Grape we have. When in good condition it is all they say of it, and I have kept it plump and good till late in May. Unfortunately, this variety also fails in many gardens, either the soil or position being once more at fault. Nor are all alike successful with Madresfield Court, another black Grape with Muscat flavour. In this instance the Vines are less fickle, and the one great drawback is the proneness of the berries to split badly during the ripening period. If this cannot be prevented failure is the result.

Other varieties which follow are more generally reliable. Foster's Seedling is not richly flavoured, but properly ripened is passably so, and does not cloy the palate. It succeeds everywhere and is one of the best stocks that can be used for shy-bearing black Grapes. All the same, it would be struck out of the list by severe critics. So also would Gros Colman, but I include it, as I happen to find it one of the best late Grapes in cultivation. If good time is allowed for ripening, colouring commencing early in August, this fine Grape is in excellent condition from November to February inclusive, far sur-

passing the best Alicante I have tested. It is particularly refreshing, invalids not tiring of it quickly, and instead of the skins being tough they are actually tender, breaking up and disappearing with the pulp. As far as quality is concerned, Gros Colman is far ahead of either Gros Maroc or Alnwick Seedling, with which it is sometimes classed. Those who have failed to grow Gros Colman satisfactorily on its own roots should give it a trial on Foster's Seedling stock before wholly condemning it. Alicante is equally variable. More often than not the berries when ripe are mere bags of sugar and water. The best I have ever tasted were cut from Vines rooting in a gravelly loam, and were ripened early. Lady Downe's may be said to be fast losing whatever popularity it ever gained. Pity it is that this should be so. With me it has always done well in strong loam, and the crop of neat, well-set, and perfectly ripened bunches never failed of appreciation any time from January to June. Before I succeeded in bringing out the good qualities of Gros Colman, Gros Guillaume was considered the best midwinter black Grape. When medium-sized to small bunches are selected these become closely furnished with well-set berries, which swell to a good size, colour perfectly, keep fairly late, and are crisp, juicy, and pleasing to the palate. Long young canes of this variety are apt to produce a limited number of sensational bunches, weighing, say, from 6 lbs. to 9 lbs. each; but worked on the Black Hamburg stock, and the laterals pruned to the second or third bud, a good choice of bunches is afforded, those responsible early removing the larger “shows” if smaller, more serviceable bunches are desired. Appley Towers is on trial, and appears to be an easily grown autumn Grape, black in colour, and of moderately good flavour. Black Hamburg never fails under ordinarily good treatment, and is the least fickle of all Grapes. Although I have only advised planting two Vines of this variety, the time may come when “J. R.” will find it advisable to devote more space to it, to the exclusion of those less reliable. This can easily be done by mixing them with the others in the first instance, and then if necessary he can lay in young rods of Black Hamburg with a view to these gradually taking the place of those condemned.

Muscat of Alexandria merits a paragraph all to itself. I shall be blamed probably for allotting so much space to it in the early house, but this grand variety has no equal in white Grapes. It forces as readily as the Black Hamburg, and is not so very much later in ripening. High temperatures can be dispensed with, a good set of berries resulting on Vines in a Hamburg house if only they are grown at the warmest end and not disposed too thickly together. This variety should also have the warmest end of a late house assigned to it, and if the Vines are annually started late in February, or not later than the first week in March, the crop will ripen perfectly under conditions that also suit late black Grapes. The same may be said of the other Muscat-flavoured Grapes, but Madresfield Court ought to be grown at the outside end of a house, so as to be able to ventilate freely during the ripening period by way of preventive of cracking.

W. IGGULDEN.

The Purple Filbert.—A group of this Filbert has a very fine appearance in the shrubbery, the colour of its foliage being comparable with the Purple Beech or Prunus pissardi. In addition the nuts produced are of excellent quality. The outer husk, which does not protrude so much as that of some other kinds, is a deep port wine colour, the shell lighter and the nut itself quite white, except the skin, which has a rosy tinge. The flavour is extremely nice, quite as good as in the best varieties of either Filberts or Cob Nuts. It does not always reproduce itself true from seed, but the majority of the seedlings show more or less colour. A better way to propagate it is by layers or by taking up an old stool

with plenty of sucker shoots and dividing it, thus securing a few roots to each divided portion, which is not always possible when getting at them without taking up the plant. Still for all purposes of a private place it is usually easy to get them, the lifting being only necessary when it is required to propagate in fairly large quantities. It is equally as strong and almost as free bearing as the common Hazel Nut and well worth a place in the fruit garden. The best time to plant is in early autumn, and it will thrive in any moderately good soil.

Loose fruit tree borders.—One of the worst cases I have seen of the ill-effects of soft tree borders was some time since in a garden in Surrey. The houses had been erected about two years, and the Peach trees chiefly planted at the same time. In every case the growth was quite outrageous, literally like Bean rods, and without the least prospect of producing fruit. I advised the gardener to lift his trees directly the leaves began to colour, to greatly solidify the soil, add plenty of mortar rubbish and wood ashes, and then replant. I do not know whether he did so, but he seemed to think fruit would come in time, of which I saw no prospect. It was easy to force a stick down 2 feet into the borders. How often do we see young Vines ruined for all permanent purposes in the same way, growers being delighted with the excessively luxuriant growth made. Market growers, by far the most successful of Grape producers, have their borders quite hard, as they also do in the case of Peach trees.—A. D.

OUTDOOR GRAPES IN EAST ANGLIA.

PROBABLY open-air Vines are more common in the eastern than any other counties, but I am sorry to find they are much neglected and seldom met with in a fruitful condition. Within a radius of a mile from where I write there are no less than half a dozen Vines on house fronts, but on only one of these is there a fair crop of fruit, and this inferior in quality. Owners of hardy Vines near towns seem, as a rule, to regard them as ornamental rather than useful, and so long as they give their walls a green appearance seem satisfied. A neighbour of mine—a builder—has a healthy, spreading Sweetwater which usually bears freely, the produce being annually made into wine. The chief hindrance to free, healthy growth and good crops is a too crowded condition of the Vines. Laterals are allowed to form too closely, stopping is neglected, with the result that a crowded mass of foliage prevents the ingress of sunlight and air, and general weakness and barrenness follow. Even when pruning and training receive due attention the roots are often in an unfavourable larder, resulting in the case of a hungry, gravelly subsoil, weak, and in a cold clayey one, rank, unripened wood.

There is no need of a large border; indeed, it is surprising in what a limited area Vines will grow and yield well for many years provided suitable top dressings, liberal mulchings and several copious waterings with liquid manure are given; and as the Grapes are generally used for wine making, the hose or garden engine may be freely used occasionally to cleanse the foliage and keep down spider without any fear of disfiguring the bunches. In planting, the best way, I think, is to take the main rod up in the middle of the wall space, carrying from this horizontal rods right and left. The laterals issuing from the main rods should be quite 2 feet apart, which will allow of the admission of a maximum amount of air and sunshine. Good results may be obtained from the ordinary close spur system of pruning, new rods being run up piecemeal when the Vine shows signs of waning, at which time also the bordering undergoes a complete renovation. Thinning the bunches is too often neglected, but attention to this matter is well repaid by the extra size and quality of the fruit. Nowhere have I seen such profitable outdoor Grapes as in Essex, where in some instances the roofs of cottages are furnished with healthy

fruitful Vines, the sale of the fruit helping materially to pay the rent of house and garden.

NORFOLK.

MYOSOTIDIUM NOBILE.

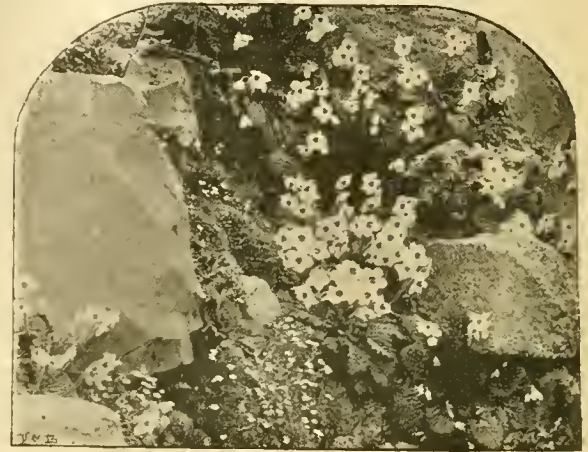
(NEW ZEALAND (?) FORGET-ME-NOT.)

PERHAPS one of the most tantalising things concerning this noble plant is the fact that it has not proved generally hardy in the British Isles or even in the more favoured portions thereof. With perfect hardiness the plant would have been an ideal subject for the rock garden, or at least that portion of it devoted to moisture-loving plants, and in company, for example, with Trilliums, Dentarias, Cypripediums would have made a striking and ornamental subject. As a plant, however, for the open garden generally a warmer clime than our own must be found. The plant has not been cultivated generally with success even in those instances where greenhouse treatment has been accorded it. Under glass the moist and cool conditions of the Odontoglossum house are well suited to it, particularly where the very cool treatment is adopted. The plant will certainly not be likely to succeed, much less attain perfection, in a dry place, for here insect pests would speedily attack it with ruinous results. I believe one of the finest cultivated batches of this plant was grown at Floore Weedon by Mr. Loder some dozen or so years

been seen, but none I have knowledge of have equalled the plants referred to. It is not difficult to raise from seeds, and the latter, being fresh, germinate somewhat freely. From the first, however, the plants should be liberally dealt with and potted without delay, wintering them either in a frame which excludes frost or a cool structure such as that devoted to Camellias. In the following spring a shift to 7-inch or 8-inch pots may be given to the largest plants, also ample drainage. A very sandy soil should be used, together with peat and loam and a little manure. With liberal treatment the largest plants should flower at eighteen months old, and anyone growing the plant will not quickly forget the giant shining leaves supported on long, deeply channelled stalks, or the leafy inflorescence that reaches to nearly or quite 2 feet high. The flowers are each about half an inch across and salver-shaped; in colour whitish at the margin and the centre rich blue, though variable. It is a true perennial in character, and with good plants to start with is worth giving a series of trials year by year by those whose gardens are situated in the most favoured parts of these islands. Failures there will be undoubtedly, and it is to be hoped some measure of success also in the end; therefore, if the whole matter is taken in hand as purely experimental by those whose time and surroundings permit, some interest-

RAMONDIAS.

THE Ramondias occupy a foremost place among free-flowering and easily-grown alpine. That they are perfectly hardy in the wind-swept heights of their mountainous homes is of course beyond question, for though here the winter's frost may exceed any frost we know in lowland places, it rarely reaches the plants that lie



Ramondia pyrenaica. From a photograph sent by Mr. Gregory, Croydon.



The New Zealand Forget-me-not (*Myosotidium nobile*). From a photograph by G. Champion.

ago, a portion of which came before the Royal Horticultural Society at the time. These were excellent examples of cultural skill. Since that time occasional exhibits of the plant have

ing experiences should be forthcoming eventually. The subject, too, is unique, and for this reason merits the above suggestions being put into practice.

E. J.

close and snug, as well as dry and comparatively warm, below the usually deep bed of protecting snow. This is even so where the plants, as in the case of these Ramondias, grow chiefly in the chinks of the rock, often spreading out on the perpendicular face of it, for these, too, are in the long season of rest frequently covered by snow for long periods. Under these circumstances the actual cold reaching the plants is not great, while what is most important is the uniformity of the conditions that exist during the long winter season. It is quite another matter when these self-same plants are grown in British gardens, as apart from the changes that must inevitably ensue is the fact of the ever-changing character of our winters, and such as are close and warm are responsible for the death of many a beautiful alpine. Neither the close, wet, warm winter nor the dry periods of frost without snow that we sometimes experience seem capable of doing the least harm to this sturdy and hardy plant. Even the long weeks of intense frost that disfigured so much and killed outright much more three or four years since left these lovely Ramondias quite unharmed, even when the plants were growing in pots, and these were in the open with full exposure, just merely standing on a bed of ashes. During this very trying time, however, the plants, moisture-loving as they usually are, looked as though the life was dried out of them, but when the frost at length broke up no plant more quickly responded to a good watering. Passing safely through such a time, with the roots and indeed every vestige of the plant frozen through and through for weeks together, I think it may safely be stated that few more perfectly hardy evergreen alpine exist; therefore, it is one to which amateurs may safely turn their attention. Its cultivation is of the easiest, so much so that it takes to loamy soil as readily as it does to one of a peaty nature, and with a mixture of equal parts of both made quite sandy, the plants will be quite satisfied. Indeed, some plants in large pots that have not been repotted these six years flower with greater freedom each succeeding spring, while some of the principal rosettes of leaves have

much increased in size. Of more importance than soil perhaps is the position, which should be rather shady, or even quite shaded, all day long. The plant, however, does not in the least object to partial sunshine, but care must be taken that the plants do not get too dry.

As showing the value of the *Ramondia* in the rock garden, there is a capital illustration in the Royal Gardens, Kew, a portion of this view being given in the accompanying picture. The plants at Kew are growing in a sort of secluded recess, of which the sides are nearly perpendicular, with rock stones freely interspersed, and the plants grouped in small companies. Some of the plants are placed, so to speak, on rocky shelves; others are in chinks between a couple of stones, and so on, practically furnishing one side of the bank in question. Some of the larger examples are very fine single rosettes as large as an ordinary dessert plate, and, with many smaller ones, constitute a very pretty bit of rock garden scenery when in flower.

One point should not be overlooked, viz., the apparent fondness for a stony soil, or the proximity of stones, and here the rosettes spread out their shaggy and wrinkled leaves quite prostrate. Among other peculiarities is its slow growth; this is so in all its stages, whether old plants or seedlings; indeed, I have known seedlings of five years' growth whose diameter would not exceed that of a half-penny, and if judged by this standard of progress it would take at least ten years to attain to flowering size. At the same time, when the latter stage is reached the plant flowers with unerring regularity each year, the stems being 4 inches or 5 inches high, and bearing, in strong plants, three flowers each. The group at Kew is of mixed colours, a large proportion being the violet-purple colour of the type. There is also a nice lot of white, and some variability among the coloured kinds. In the Kew collection I believe there are other kinds also, but I do not remember to have seen these in flower. Perhaps among them all no more exquisitely beautiful a plant could exist than the white form, which is a veritable gem. The large plants at Kew must be of considerable age, as they have been known to me some years and appear but little larger than when I first remember them.

After flowering, the plants produce seeds very freely, and, where it is intended to raise seedlings, I know of no better way than sowing the seeds on finely-chopped Sphagnum Moss, placed in pots and made rather firm, standing the pots in a saucer of water to supply the moisture. The pots need not be more than half filled, or rather more, and with a few pieces of charcoal at the bottom to help keep the Moss sweet. This and removing the saucer at times will do all that is needed in this direction. Another mode not generally known of increasing these things is by leaves, in the same way as Begonias, by laying or fixing them on a pot of moist sand. The process, however, is a slow one, as though the petiole will emit roots into the soil in three or four months, it will take another equal term before any sign of plant life appears. Naturally enough, the best results are secured from the largest leaves, but as the denuding of such will quickly spoil a plant, the system is not to be recommended in a general way. Indeed, in any case it is only worth while with the rarest kinds, as the old kind may be had in quantity and at quite a cheap rate. The longevity of the plant is remarkable, and under cultivation I do not remember seeing a plant of *Ramondia* collapse. Frequently bad packing is responsible for great losses in transit, but this is another matter.

E. J.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 12.

THIS was a very good meeting indeed. Of hardy flowers the Rose was still pre-eminent in all its glory as an autumnal subject, notably the Teas, the Hybrid Teas, and a few of the more select of the Hybrid Perpetuals. These were staged in fine condition from Waltham Cross, Cheshunt, and Oxford. Michaelmas Daisies made their appearance, but these, although present in a few of the better forms, will be more in season next month. A few other good hardy subjects were shown, as the *Colchicums* and earliest *Cyclamens*. Of Dahlias there were more exhibits than of any other flower, and of these it is pleasing to note the progress being made in the Cactus section, which is by far the most fascinating of any class. Both in variety of form and of colour, as well as in the habit of the plants, is this improvement very manifest. Several awards to the most approved of these were made, as well as to singles and pompons. Early *Chrysanthemums* (too early, in fact) made a good display. A few other good examples of stove and greenhouse decorative plants were staged, notably of *Acalypha Sanderiana*.

Orchids were not in strong force certainly, but still a few good things were in evidence, as, for instance, some finely-flowered *Dendrobium formosum giganteum*. Fruits, on the other hand, were well represented, both from under glass in the way of Melons and Grapes and from outside in that of Apples and Pears. Vegetables were chiefly confined to the splendid exhibit from Aldenham Park Gardens, finer than which no one could possibly desire, especially when the prolonged drought is taken into consideration. Fortunate are they who at such times have the benefit of a rich deep soil; the risk of failure then is greatly minimised. The lecture by Mr. Mawley will, when published, be read with great interest, as it bore upon the long drought of 1898, which has this year again been repeated.

Orchid Committee.

A first-class certificate was awarded to—

CATTLEYA LUDDMANNIANA (SPECIOSISSIMA) ALBA.—This is one of the most beautiful of the white Cattleyas. The sepals are upwards of 3 inches long, pure white; the petals as long as the sepals, about 2½ inches broad, of fine form and substance. The lip is broad as in the type, pure white, except the blotches of lemon-yellow on each side lobe and through the base of the throat. The plant carried a two-flowered raceme. It is a most rare and desirable variety. From Mr. W. Duckworth, Shaw Hall, Flinton, Manchester.

Awards of merit were adjudged to the following:—

CATTLEYA KIENASTIANA VAR. AURORE.—A hybrid derived from the intercrossing of *C. Luddmanniana* and *C. Dowiana*. The sepals and petals of good form and substance, deep rose with an indication of a lighter marbling. The broad lip dark rose around the margin with a deep purple blotch in the centre of the front lobe. The disc and the whole of the throat is yellow, suffused with dark brown and lined with a brighter shade of yellow. It is a most distinct and desirable form. Two cut flowers came from Mr. Bond, gardener to Mr. C. L. N. Ingram, Elstead House, Godalming.

LÆLIO-CATTLEYA CALLISTOGLOSSA (Leon's var.).—This is one of the most beautiful forms of this hybrid we have seen. It is the result of intercrossing *Lælia purpurata* and *Cattleya Warscewiczii* (gigas). The sepals and petals of good form and substance, of an intense rose shade of colour. The large lip is wholly of crimson-purple, which is extended through the throat, entirely suppressing the yellow eyes which are so characteristic to hybrids of this cross. There is a darker shade of colour in front of the throat. The plant came from the collection of Mr. H. S. Leon, Bletchley Park, where it was raised four years

ago by Mr. Hislop, the gardener. It is a most distinct and desirable form.

M. E. Zollinger Jumy, Villa Gretin, Zurich, sent a good form of *Vanda Sanderiana* with a raceme of eleven flowers and a pretty variety of *Cattleya O'Brieniana*. Mrs. Temple, Groombridge, sent a light form of *Cattleya Gaskelliana*. Sir Trevor Lawrence sent *Cypripedium niveum maculatum*, resembling some forms of *C. Godefroyæ*. Col. R. W. Shipway, Grove House, Chiswick, sent a distinct and fine form of *Cattleya Hardyana*. Mr. C. L. N. Ingram sent four cut flowers of the typical variety of *Lælio-Cattleya callistoglossa*. Mr. F. Hardy, Tyntesfield, Ashton-on-Mersey, sent *Sophro-Cattleya Hardyana* (*C. Aclandæ* × *S. grandiflora*) with two of its yellow and purple flowers. Mr. F. W. Moore, Glasnevin, sent *Cryptophoranthus hypodiscus*, a distinct variety of the Window Orchid, with creamy yellow and purple-tipped flowers (botanical certificate). Messrs. F. Sander and Co. sent a dozen beautifully grown and finely flowered plants of *Dendrobium formosum giganteum*.

Floral Committee.

First-class certificates were awarded to the following:—

RETINOSPORA OBTUSA AUREA CRIPPSII.—This is likely to be of much value in the garden. Judging by its name, it would appear to be a form of *R. obtusa*, yet it is distinct from that type, so graceful and somewhat pendent in its gracefulness as almost to merit specific distinction. So far as knowledge is obtainable, it is a selected seedling taken from a bed of the above kind some years ago. The plant not only keeps its colour in summer, but in winter also, in this respect quite surpassing the Lawson's Golden Cypress. The plant is altogether less dense than is *R. obtusa aurea* and much finer in colour. The exhibited example was splendidly coloured and very pleasing and elegant. From Messrs. Cripps and Son, Tunbridge Wells.

EUCHARIS BURFORDIENSIS.—This is a hybrid between two well-known kinds—*E. Mastersii* and *E. Sanderi*. In the result the new-comer is almost funnel-shaped in outline, minus the centre coronal-like cup of *E. grandiflora*. The present hybrid is not only a handsome addition to this group, it is a novelty of undoubted all-round merit, both for its intrinsic worth and its general freedom of flowering. From Sir Trevor Lawrence, Burford Lodge, Dorking (gardener, Mr. Bain).

The following obtained an award of merit:—

BEGONIA MRS. LEOPOLD DE ROTHSCHILD.—This is a pink-flowered sport from the well-known *Gloire de Lorraine*. The habit of the plant is more compact and the flowers larger, which gives the impression of greater freedom of flowering. The parent plant, however, is of a looser habit, hence the difference. The new-comer is a decided gain, the form of the flowers also being much improved. A charming pot plant of most useful size. From Mr. Leopold de Rothschild, Gunnersbury House (gardener, Mr. J. Hudson).

ROSA CORALLINA.—This is a Tea Rose and exhibited as a bedding kind, for which its undoubted freedom suits it exactly. The colour is very distinct, and perhaps more nearly resembles *Papa Gontier* in this single respect than all else. The outer petals may be termed a rosy-peach, the centre being of a madder-rose tint. It is, however, a variable flower, as, for example, there is a touch of salmon on the tips of some more expanded flowers. The buds are very long and tapering and almost crimson-carmine in shade. It is said to possess great vigour and freedom of flowering, and if thoroughly hardy should prove welcome in the garden where free-growing sorts are in demand. From Messrs. Wm. Paul and Son, Waltham Cross.

DAHLIA RED ROVER (Cactus).—An exceptionally large flower, possibly too large, indeed, as its presence on the show table coupled with the present award will set a fashion for over-large flowers. This is not needed. The colour is crimson-scarlet. From Mr. Green, Dereham.

DAHLIA MRS. J. J. CROWE (Cactus).—A splendid addition to the self yellow class, the shade

beautifully clear and good, the florets long and narrow, and in short a shapely and beautiful flower throughout. From Mr. J. West, Brentwood, Essex, and Messrs. Keynes, Williams and Co., Salisbury.

DAHLIA GREEN'S WHITE (Cactus).—A good and pure white of useful size, the tips gently incurved. From Mr. Green, Dereham.

DAHLIA MAYOR TUPPENY (Cactus).—A beautiful orange scarlet, with light golden centre. From Mr. J. Stredwick, St. Leonards.

DAHLIA MAJOR WESTON (Cactus).—A clear crimson-scarlet with ruby on the reverse side of the florets. From Mr. J. Stredwick.

DAHLIA UNCLE TOM (Cactus).—A very deep maroon-crimson, the centre being almost black, one of the darkest we have yet seen. From Mr. Stredwick.

DAHLIA MAURICE T. WALSH (Cactus).—In this the colour is orange and yellow, yet not sufficiently well defined or even distinct enough to merit the present award. Cactus Dahlias are greatly increasing at the present time. In our opinion the above is a poor and indistinct kind. From Mr. J. Stredwick, St. Leonards.

DAHLIA EMPEROR (Cactus).—A large flower of a rich magenta-rose, florets well incurved. From Messrs. Keynes, Williams and Co., Salisbury.

DAHLIA LOADSTONE (Cactus).—A fine orange-red, the florets having a distinct twist. From Messrs. Keynes, Williams and Co., Salisbury.

DAHLIA INNOVATION (Cactus).—A rich and telling scarlet, the colour of which is enhanced by the pure white tips of the florets. From Messrs. Keynes, Williams and Co., Salisbury.

DAHLIA CHEERFULNESS (pompon).—This pretty kind is margined or tipped with scarlet-crimson, while the base is of a yellow shade. From Messrs. Keynes, Williams and Co., Salisbury.

DAHLIA EMPRESS (show).—A well-formed flower in which lilac-purple predominates in a rather uniform manner. From Mme. St. Pierre Harriss, Orpington.

DAHLIA NELLIE NICHOLSON (single).—A well-formed flower of medium size, the colour white, bordered carmine-rose. From Mr. M. V. Seale, Sevenoaks.

DAHLIA EDDIE OLBEIN (single).—A distinct sort, colour rosy mauve and pink, with a clouded yellow base. From Mr. M. V. Seale, Sevenoaks.

DAHLIA VERONICA (single).—A good scarlet, freckled with orange and yellow. From Messrs. J. Cheal and Sons, Crawley.

DAHLIA DAISY (single).—Ruby-crimson in colour, lightly freckled with white. From Messrs. J. Cheal and Sons, Crawley.

DAHLIA FLAME (single).—A good and distinct flower in which orange-scarlet predominates, with a few lines and bars of similar hue. From Messrs. J. Cheal and Sons, Crawley.

There were some other good flowers, too, notably the Roses from Waltham Cross that Messrs. Wm. Paul and Son brought in such numbers and such quality. These for the most part were set in baskets, and, arranged with many buds as well, were seen to advantage. Some of the foremost kinds were Viscountess Folkestone, La France, very good; Mme. A. Chatenay, Marie van Houtte, very pleasing; Maman Cochet and the white form from it, which is equally delightful; the pretty Queen Mab, Souv. de Catherine Guillot, the ever-flowering Enchantress, the miniature Perle d'Or, Caroline Testout, Mrs. Laing, Gustave Regis, Francisca Kruger, Papa Gontier, and others, all beautiful. The new bedding kind, Corallina, was in the midst of all, and very charming was a basket of its distinctly coloured flowers and its richly coloured and very long buds. In the midst of all this flower and fragrance, well-berried shoots of the rugosa kinds appeared, the whole making a rich and telling display in mid-September. A silver-gilt Flora medal was deservedly awarded. Another exhibit of Roses came from Mr. Geo. Prince, of Oxford, and arranged in much his usual style, which is usually an attempt at decoration with Roses rather than bringing a great mass of flowers in the more primitive basket. In the large flower-

holders of the Princess pattern Mr. Prince had set up many of the choicest kinds, which with the taste displayed in arranging made a very pleasing exhibit as a whole (silver Flora medal).

Mr. T. S. Ware, Tottenham, set up a very fine display, in which several sections of the Dahlia played a leading part. Among the Cactus Dahlias were such good things as Firebrand, Magnificent, Amber (which is yellow and amber shade and a really fine flower), Beatrice, Starfish, Miss Webster (white), the fine yellow Mrs. C. Turner, Sylvia (mauve), Mrs. Peart (white), and others. There were also a large lot of pompons, very pretty and useful many of them, and an equally good lot of singles in great variety. Miscellaneous plants in the same group embraced Sunflowers in variety, very showy and helpful indeed in a group with so much intensity of colour; Eulalia, Scabiosa caucasica, Michaelmas Daisies, Heleniums, Heliopsis, Gaillardias, and such like, all assisting in making up a very fine exhibit (silver Flora medal). Mr. John Green, Norfolk Nurseries, Dereham, likewise had a splendid display, a display that at least must have given satisfaction to those who cannot endure the crowding together *en masse* of all the flowers available at the moment. In Mr. Green's exhibit there was no crowding and no attempt at it. The flowers, too, were of the finest in their respective colours, and the group as a whole was exceptionally strong in Cactus Dahlias. It was here where Red Rover was seen, a large, if not even a formidable flower. Yet it must be given its due; its largeness was not coarseness. It is one of the intended novelties of the coming year. Zephyr, which is also a coming novelty, is rose-carmine. Dr. Nansen is scarlet; Eclair, vermilion scarlet; Ranji, deepest maroon; Capstan, salmon scarlet; Wallace, pale orange and buff, quite a new combination; Britannia, salmon-buff; Dryden, deep crimson-scarlet; Green's White, and others. The majority of the flowers were thinly arranged on sloping stands, and these occurring at intervals in the background, opened recesses for inserting other kinds in smaller lots, thereby diminishing the formality of the whole to the lowest limit. The arrangement was good, and great care had been exercised in making the most of a comparatively small number of flowers (silver Flora medal).

Dahlias, too, were again well shown by Messrs. Joseph Cheal and Sons, Crawley, who had an exhibit extending nearly throughout the central table of the Drill Hall. And here, again, not only Cactus, which appear to be everywhere in the foremost rank, but pompons and many fine single kinds were admirably well shown. Indeed, this firm would appear to excel in this direction from the attention it has given to the section, and the good things also that have found publicity through their hands. A silver-gilt Flora medal was awarded this comprehensive group. A fine lot of Dahlias were also shown by Mr. J. T. West, Tower Hill, Brentwood, who had many fine boxes of the show kinds fronting a good lot of Cactus and other forms. In this lot pompons, too, were a strong feature (silver Banksian medal). Dahlias came in considerable force from Messrs. Jones and Son, Shrewsbury, though here the attempt was rather made to display bouquets and stands of the flowers as suggesting their utility in decoration rather than their value as garden flowers (silver Banksian medal). Still another lot was that from Mr. James Stredwick, Silver Hill Park, St. Leonards, whose best flowers are already given in the awards. Then in a mixed group, which was, however, largely composed of Dahlias, Messrs. J. Peed and Son, Roupell Park Nursery, West Norwood, made a big display, the Dahlias being interspersed with Bamboos and other grasses and similar plants, together with the pretty white Michaelmas Daisy Mrs. W. Peters, a rather dwarf, free-flowering plant. A group of this latter plant was also set up at the entrance by Messrs. Peed (silver Banksian medal). The Messrs. Cripps and Son, Tunbridge Wells, apart from the golden Retinospora, showed a beautiful variety of Japanese Maples, branches and twigs cut from plants grown in the open ground and

under two years old. These are seedlings raised in these nurseries and are grown in great quantity, the colours being as beautiful and varied as is possible in these plants. Messrs. W. Cutbush & Sons, Highgate, had a fine exhibit, composed entirely of Hydrangea paniculata grandiflora, the heads of bloom exceptionally fine and well developed, the trusses being arranged amid a groundwork of Maiden-hair Fern. A semi-circular group of early-flowering Chrysanthemums was set up by Mr. J. H. Witty, Nunhead Cemetery, the varieties consisting of Mme. Desgrange and its sports, Lady Fitzwygram, Marie Masse, Harvest Home, Mme. Jolivart, and others. There were some nicely-grown flowers here, and the plants were all in pots. At present it is a great labour to form the most perfect pudding-shape top to these groups, which are not instructive but the reverse. Maiden-hair Ferns formed the margin to this over-precise mound of flowers (silver Flora medal). Messrs. Wallace & Co., Colchester, brought up a Liliun speciosum album covum, the finest of all this group; Hemerocallis aurantiaca major, and some pots of the Atamasco Lily (Zephyranthes Atamasco), the buds of which were nearly to the bursting stage.

A large group of mixed hardy things came from Messrs. Paul and Son, The Old Nurseries, Cheshunt. Here we noticed many of the most beautiful of the early Michaelmas Daisies, such as Aster Amellus bessarabicus varieties, A. Lindleyana, A. acris, a mass of starry flowers; A. Novae-Angliae roseus, very showy; A. N.-A. pulchellus, as well as several showy varieties of the single forms of the China Aster, Aster sinensis. Other good things in this very extensive group were Clematis Davidiana, Senecio pulcher, very showy in its flower-heads; Helenium pumilum, Scabiosa caucasica, Helianthus Miss Mellish, very fine, H. multiflorus pl., Coreopsis, Gaillardias, a charming basket of Cyclamen hederifolium album, very beautiful in the mass, some pretty tufts of Meadow Saffron in several forms, Tritoma nobilis, Phlox Etna, Heliopsis Pitcheriana, a fine rich orange, Helenium nudiflorum, Plumbago Larpenae, Funkia subcordata grandiflora with its pure and fragrant flowers, Harpalium rigidum, Liliun speciosum roseum, a few charming Roses, Clerodendron trichotomum, the rather scarce Asclepias tuberosa with its clear orange-scarlet flowers, and many other things that assisted in making this a very extensive as well as comprehensive group (silver Banksian medal). The Messrs. Barr and Sons, Covent Garden, also had a group of hardy flowers mostly of the showy class, such as Statice latifolia, a variety of Aster Novae-Angliae, Sedum spectabile, Helianthus giganteus, Liliun speciosum Kratzeri, Zephyranthes Atamasco, the dainty Leucocjum autumnale with its bell-shaped blossoms, faintly tinted rose; Helianthus H. G. Moon, a variety much in the way of H. multiflorus maximus; Zauschneria californica splendens, Phlox Coquelicot, the Marsh Gentian (G. Pneumonanthe), Rudbeckia Golden Glow, Senecio pulcher, Lonicera sempervirens, Aster ptarmicoides, a small white flowered sort; Parnassia caroliniana, a pretty veined flower that makes an excellent study for the microscope if not very attractive to the eye, and the curious Goldlocks, Chrysocoma (Aster) Linosyris (bronze Flora medal). Mr. W. Wells, Earlsfield, staged a group of early-flowering Chrysanthemums, in which the majority were old and tried kinds which appear to be standing the test of time and giving satisfaction to the public. Such well-known kinds as Harvest Home, Queen of Earlies, Marie Masse, Mrs. Pitcher, Blushing Bride, Arthur Creepy, Albert Chausson, Gustave Gruderwald, Mme. Zephyr Lionnet, Mme. Jolivart, Flora, Lady Fitzwygram, &c., were being mostly shown in bunches and naturally grown. Messrs. Hugh Low and Co. showed a curious freak in Calla Elliottiana, in which a leaf blade was attached to the spathe, and on the one side had imparted to it some of the golden colour of the spathe.

From Gunnersbury House Mr. Leopold de Rothschild (Mr. J. Hudson, gardener) sent a

splendid lot of *Acalypha hispida* (Sanderi), the plants teeming with the coloured inflorescences from short lateral stems. The plants had been treated as standards, *i.e.* grown to a single stem to about 6 feet high and then stopped twice or thrice to form a head at the summit of the stem. Thus grown the plants have a most striking effect, less so in the nakedness of the Drill Hall and in the way they were placed than would happen when the plants were employed in company with tall and graceful Palms and the like. Too frequently a lack of colouring in stately rooms where decoration is carried on is very noticeable, but which is now no longer necessary, seeing this *Acalypha* can be so grown and in so short a time. From a cultural point of view the plants were excellent. It is, we believe, the first time this plant has been treated in this way (silver Banksian medal). Baskets of Begonias were also shown by Mr. Hudson.

Fruit Committee.

This committee attended to a fair share of exhibits of excellent quality, vegetables being grandly staged from Aldenham House and Melons and new Apples being plentiful, with other choice fruits.

Awards of merit were given to the following :—

APPLE T. A. KNIGHT.—A seedling from Cox's Orange and Peasgood's Nonsuch, a very beautiful fruit and of pleasing colour, above medium size and of first-rate flavour, deserving a higher award, but as the fruits were not ripe the committee desired to test them again at a future meeting. From Mr. Ross, Welford Park Gardens, Newbury, Berks.

APPLE VENUS PIPPIN.—A beautiful early dessert variety, medium size, yellow skin, with soft white flesh and very handsome; of conical shape, with a brisk flavour. From Mr. W. J. Godfrey, Exmouth, Devon.

APPLE BEN'S RED.—A handsome early dessert variety with bright red skin, seedling from Devonshire Quarrenden, but larger than that variety. It has firm flesh and is of remarkably fine quality; a heavy cropper.

CUCUMBER BECKETT'S ACHIEVEMENT.—A very shapely fruit, with scarcely any spines, ribbed with a beautiful deep green colour and little neck, not unlike a small Telegraph, but shorter. A valuable winter fruiter. From Mr. Beckett, Aldenham House Gardens, Elstree, Herts.

The last-named exhibitor staged a magnificent collection of vegetables, and the quality was more marked considering the bad season. They were staged for the Sherwood Cup, but unfortunately the exhibitor mistook the date. To show the value of the exhibit the committee unanimously awarded a gold medal. There was a beautiful bank of Veitch's Autumn Giant Cauliflowers; several varieties of Tomatoes, Golden Jubilee, Perfection, Polegate, and Favourite; Beans Veitch's Climbing and Ne Plus Ultra; grand Veitch's Model Carrots, Maltese Parsnips, and very fine Ailsa Craig, Cocoa-nut and The Commodore Onions; Kales, Cabbage, and Savoy in variety; Cucumbers Beckett's Achievement and Ideal, beautiful fruits; Pritetaker Turnips; Potatoes perfect in shape and colour, Windsor Castle, Satisfaction, and Goldfinger being staged; Indian Corn in the green pods, the variety being Caragua; excellent Model Leeks, and Salsafy and Scorzonera; Perfect Celery; Standard-bearer, White Gem, and Prize-taker Marrows in variety, Peas Autocrat, a fine dish, the whole well deserving the gold medal awarded.

Messrs. Wm. Paul and Son, Waltham Cross, had a fine exhibit of forty dishes of Apples and eighteen trees in pots. The latter was certainly a remarkable exhibit, the fruit being very fine, and the trees dwarf, compact specimens, laden with fruit. The collection included Beauty of Kent, Peasgood's Nonsuch, Potts' Seedling, Cellini, Prince Albert, Belle Pointoise, Mabbott's Pearmain, Lewis' Incomparable, Annie Elizabeth, and Scarlet Nonpareil, all excellent, with good dishes of Wealthy, Tyler's Kernel, Worcester Pearmain, Bismarck, Lady Henniker, Frogmore

Prolific, Washington, Peasgood's Nonsuch, and good Cox's Orange (silver-gilt Knightian medal). Messrs. Veitch, Ltd., Chelsea, sent twenty-two varieties of Tomatoes, all grown in the open, trained to stakes. These were most interesting, showing how well these plants fruit in a favourable season. They were laden, being set within 12 inches of the soil, the most notable varieties being Chemin, Ham Green, Acquisition, Golden Jubilee, Frogmore Selected, Trophy, Criterion, Perfection, Large Red, and the Peach Tomato (silver Knightian medal). Mr. W. Taylor, Tewkesbury Lodge Gardens, Forest Hill, S.E., staged a very pretty lot of fruit, some half-dozen varieties of Grapes being shown on small single stands at the back of the collection, and the bunches were well finished, the varieties being Foster's Seedling, Directeur Tisserand, Muscat of Alexandria, Gros Maroc, Alicante, and Alnwick Seedling, very fine Gladstone and Princess of Wales Peaches, Golden Drop, Primate, and Late Orange Plums, Williams' Bon Chrétien Pears, with Peasgood's Nonsuch Apples grown under glass, and several varieties of Tomatoes (silver Knightian medal). Mr. Geo. Woodward, Barham Court Gardens, Maidstone, had a notable exhibit, not large, but demonstrating what can be done by different culture to that usually adopted. It included excellent Dymond Peaches grown on a north wall; Hale's Early and Royal George from bush trees in the open, very good fruits and well coloured, the trees having borne regularly for some years; Sea Eagle Peaches from wall with coping, and splendid Rivers' Orange and Humboldt Nectarines from walls, and Beurré Mortillet and Triomphe de Vienne Pears. A silver Banksian medal was deservedly awarded. Mr. S. Mortimer, Swiss Nurseries, Farnham, had two dozen very good Melons, and one a seedling of great merit, but not ripe, the others being well known kinds noted for their rich flavour, a dozen fruits of Hero of Lockinge and Sutton's Royal Favourite being staged (silver Banksian medal). Mr. J. Coles, Highly Manor, Haywards Heath, staged a small collection of fruit, having very good Walburton Admirable and Exquisite Peaches, the last-named a beautiful yellow-fleshed variety; Pitmaston Orange and Violette Hâtive Nectarines; Pond's Seedling and Magnum Bonum Plums; good Morello Cherries, with Currants and Apples (silver Banksian medal). Mr. W. Miller, Ruxley Lodge Gardens, Esher, was awarded a cultural commendation for an excellent lot of Princess of Wales Peaches. A Melon named Taunton Hero was shown by Messrs. R. Veitch, Exeter; The Captain, by Mr. C. Ross, and from other sources, but all were passed by the committee. Apples Stamford Beauty by the Messrs. Brown, The Nurseries, Stamford; also two new seedlings by Mr. Ross, and Hunt's Early by Mr. W. Hull, Maidenhead, and Mr. E. Holden, Grosvenor Cottage, Devonport; and Mr. J. Rutter a new seedling named Lord Kitchener, Wisbech, Lincoln; new Tomato Abundance, from Messrs. Veitch, Exeter, a very heavy cropper; a new Tomato named Wonder of Italy from Mr. J. Green, The Nurseries, Dereham, Norfolk, a plum-shaped pretty fruit. Maize or Indian Corn in six varieties for use as a vegetable in a green state came from Mr. Wythes, Syon House Gardens, Brentford, from seed sown in May, and Aubergines from the society's gardens.

United Horticultural Benefit and Provident Society.—The annual dinner of the above society will take place at the Holborn Restaurant, High Holborn, W.C., on Thursday, October 5, at 6.30 p.m. Mr. W. Y. Baker has kindly consented to preside on this occasion.

The weather in West Herts.—Still another warm week and the tenth in succession; the past week was, however, the least warm of the series. On the night preceding the 11th the exposed thermometer fell to within 3° of the freezing point, making this the coldest night we have yet had

this autumn. During the last few days of cooler weather there has been a gradual, but decided fall in the ground temperatures. Nevertheless, at 1 foot deep the soil is still 3°, and at 2 feet deep 4° warmer than the September averages for these depths. Rain has fallen on five days this month, but the total measurement amounts to less than half an inch. No rain-water at all has come through either of the percolation gauges since the end of August. On the 6th and 12th the atmosphere was extremely calm, the mean rate of movement of the air at 30 feet above the ground being on each of these days less than a mile an hour, and with one exception less than in any September of which I have here any record.—E. M., Berkhamsted.

NOTES OF THE WEEK.

Aster Mrs. W. Peters.—Among the earlier Michaelmas Daisies this pretty white kind may certainly figure as one of the most free-flowering. It is scarcely a pure white kind, which is, perhaps, a gain rather than the reverse, as the heads of flowers would retain the amuts when in the open, and so quickly render them unsightly. As a pot plant it is a useful kind, and free-flowering and compact withal.

Zauschneria californica splendens.—Few of the late summer rock plants are more showy than this when covered with an almost endless number of orange-vermilion flowers. The plant is, perhaps, somewhat more hirsute than the type, but this in no wise detracts from its general good qualities, and when established it is among the showiest occupants of the rock garden, free-flowering and beautiful withal.

Hibiscus californicus.—We send you flowers of this from a plant that has been growing in the open ground in our nursery for three or four years without protection. It is scented like the *Magnolia grandiflora* when growing. The plant has ten shoots, each with two expanded blooms and about twenty buds to each shoot. The leaf is of a light green colour, hairy, toothed, and divided into three lobes.—KELWAY AND SONS.

Montbretia Rayon d'Or.—Among the modern varieties of this group, few, if any, have given such general satisfaction as this beautiful and well-marked kind. The flowers are considerably larger than in the majority of kinds and possess more substance, with a rich, deep tone of colour, which is also very full and well set off by the fine ring of carmine near the base internally. The growth is strong and sturdy, and the variety is one of considerable value for the garden.

Dahlia Red Rover.—This is the name of an exceptionally large Cactus kind. It is more than likely that it is too large, yet the award just made to it would appear a confirmation on the side of size. It should, however, in fairness be said that it is not a rough, if a large flower. At the same time a stand of half a dozen of its blooms would be altogether disproportionate when side by side with other good kinds. It is a self-coloured flower of a crimson-scarlet hue.

Dahlia Mrs. J. J. Crowe.—There are some good yellow Cactus Dahlias in cultivation at the present time, but there is room for this kind, which is quite distinct. Its two shades of yellow are extremely soft and pleasing, and this, coupled with the elegant, long and finely recurving florets, renders it at a glance a really beautiful as well as an artistic flower. The variety occurred in at least two stands at the Drill Hall the other day, and in each the same fine form was noticeable.

Tufted Pansy White Beauty.—Although sent out as recently as the spring of the present year, sufficient has been seen of this beautiful bedding sort to convince one of its excellent merits. The growth of the plant is somewhat unique in its dwarf and creeping-like style of covering the ground with a peculiar bright tint of green. Contrasted with this, the pure white rayless blossoms on stout erect foot-stalks stamp this variety as an ideal one for massing in beds and borders.—D. B.

Tufted Pansy Endymion.—This is a variety which was distributed two years ago, and although highly prized by some because of the large size of its blossoms and also the robust character of its growth, left much to be desired. Early in July last a batch of plants of this variety was cut back, and so satisfactory has been its progress since, that there is now a charming display of blossoms of a most refined kind. The colour is best described as soft clear yellow. The

prospect of a late display of these welcome blossoms is now very bright indeed.

Aster Shorti.—This is one of the prettiest of the early perennial Asters, and this season with me is in much better condition than has been the case for the last two years. Recent rains and cooler weather have contributed much to the plant's well-being, long graceful sprays, each carrying a large number of rather small bluish lilac blossoms, characterising the display. At the moment of writing, this variety is one of the most pleasing sorts in the collection of a goodly number of plants.—D. B. C.

Hibiscus Manihot.—The exquisitely yellow shaded blossoms of this plant render it a most desirable object in the flower garden where a good soil is at hand, so that a free growth is thereby ensured. The shade of colour comes perhaps between lemon-yellow and primrose, and the fine flowers being quite 4 inches across when open make it quite a conspicuous object at the present time. For mingling with other plants in a bed or as one of a group of foliage and flowering things this subject is worthy of note.

Tufted Pansy Florizel.—Whatever may have been said regarding the good qualities of this variety is fully deserved. Right throughout the flowering season this kind has been most consistent in the useful character of its display, and now that cooler weather and other conditions of our climate are contributing so much to its well-being the flowers are among the most interesting. The plants are flowering profusely, and the colour is a lovely shade of lilac-lavender. The stiff footstalk also ensures the blossoms being seen.—C.

Aster Novi-Belgii Parker nanus.—This variety is a distinct gain to the Michaelmas Daisies, and speaks well for the quality of the seedlings raised at Framfield by Mr. Norman Davis. It is said to be a seedling from Robert Parker, flowering considerably earlier than that variety. Unlike the parent plant, the height is not more than 2 feet, and the habit is beautifully branching, yet compact. The blossoms are large, and each one is produced on a short footstalk, and as a whole the character of the plant is unique and pleasing.—C.

Chrysanthemum Piercy's Seedling.—Although one of the oldest of the early-flowering pompon varieties, and a legacy from the late Mr. W. Piercy, this is one of the most valuable sorts for bedding. At Waterlow Park several grand masses are now to be seen in the pink of condition. The plant is bushy and dwarf and wonderfully profuse in its display, the colour of the blossoms being a striking orange-bronze, passing to yellow with age. The season of flowering is rather later this year than usual. The constitution is robust.—D. B. C.

Asters: Some sorts which have failed.—While some varieties appear to be doing very well just now, others have suffered so much by the great heat of the past summer that the prospect of anything like a satisfactory display seems to be very remote. In a favourable situation there may be nothing to complain about, but in positions which are exposed to the sun's influence the result is disappointing. Varieties looking in poor condition are *A. cordifolius elegans*, *cordifolius Diana*, *vimineus* and *ericoides*. The lower foliage of many other sorts also is quite seared, and gives the plants an unsatisfactory appearance.—D. B.

Grouping Japanese plants.—Japanese plants produce a very pretty effect when grouped together, but are very seldom seen in practice, or at least not to any appreciable extent. Quite recently we noted an arrangement in a private garden, where the pretty forms of the Japanese Maples were associated freely with some of the best of Lilies, viz., *L. speciosum Krætzleri* and the more gorgeously coloured *L. auratum*. Happily, too, the latter had not predominated in this case, and by using it in moderation, neither its splendour nor its powerful fragrance were felt to be conspicuous. Moreover, the copper and bronze tones of the Asters with the Lilies above made both a pretty and effective bed and a good garden picture.

Primula floribunda Isabellina.—This variety of *P. floribunda* is at present growing well in the conservatory at Southwick, N.B., one of the country houses of Sir M. J. McTaggart Stewart, Bart., M.P. The flowers of this are of what is known as the grandiflora type of this Primula, and the soft yellow colour is well indicated by the variety named Isabellina. Mr. J. Blacklock, the head gardener, grows a few novelties every year to give the variety so welcome in a garden.—S. A.

Retinospora obtusa aurea Crippsi.—Compared with the much denser *R. obtusa aurea*, the

plant named above is graceful and elegant without the shortened branches of the old form that possess a certain restricted growth. The new plant is said to retain the golden hue throughout the year, always somewhat brighter, of course, in the early summer when growth is renewed. One of the best all-round golden conifers is the Lawson's Golden Cypress, but even this is surpassed by the plant which the floral committee honoured the other day with a first-class certificate.

The Parsley-leaved Bramble.—One is pleased to meet with this Blackberry now and again in good gardens. A few days ago I came upon a good bed of it in Terregles Gardens, Dumfries, where it is valued for its free-fruited and ripening qualities. It is in these respects much more reliable than some of the American Brambles, which were the cause of so much disappointment to many some years ago. When such sorts as Wilson Jun. were introduced I was much interested in them, but their behaviour in most northern gardens has not been such as to give one much confidence in them. They usually ripen too late to be of any use. Those who care to try them should give them a very sunny position.—S. ARNOTT, *Carsethorn, Dumfries, N.B.*

Chrysanthemum maximum Triumph.—There seems no end to the raising of new varieties of *Chrysanthemum maximum*. It is almost hopeless to expect to see and test the numerous seedlings now being sent out under different names. We have several pretty varieties with laciniated petals, of which Elaine was one of the earliest, besides several whose special worth consists in the breadth of their petals and the large size of their flowers. I saw the other day a young plant of one bearing the rather high-sounding name of Triumph. It looks a promising variety, its special qualities, so far as could be discovered, being the purity of its white flowers and the freedom from stiffness which characterises them. One drawback to the beauty of these Chrysanthemums or Ox-eye Daisies is due to the flies, which appear to have a special liking for them, and which in most seasons soon spot the blossoms and make them unsightly.—S. ARNOTT.

Lilium speciosum album novum.—There is no white variety of *Lilium speciosum* that can equal this. The flowers are much more solid in appearance than the ordinary white form known as *L. s. Krætzleri*, and being much less reflexed, present a greater display when planted *en masse*. It is also possibly a stronger grower, the distinct foliage having a more leathery touch and the stems being very vigorous. In the bud state greater purity of tone may be observed. A well-marked feature of the plant, however, is the yellow or golden hue of the pollen masses, and even these usually are of a more vigorous turn than the dark brown form. As to its earliness to flower, it sometimes precedes those known as *Krætzleri* by a few hours, but not always; indeed, in a large group the whole of which were planted together some of the older kinds were earliest to expand. *Album novum* was finely shown by Mr. Wallace, of Colchester, on Tuesday at the Drill Hall.

Begonias at Kirkcconnel, N.B.—Although hardy flowers form the special feature at Kirkcconnel, Newabbey, N.B., it is not to be supposed that other things are not grown well also. For a few years Begonias have been taken in hand, and this year Mr. John Harper, Mrs. Maxwell-Witham's gardener, has been remarkably successful. No doubt some of the credit is due to the raisers of the fine Begonias grown, but only proper cultivation would give such results. Nothing has been exhibited from Kirkcconnel this year, but one is safe in saying that the Begonias would take a high place in keen competition. The plants are remarkably vigorous, and leaves and flowers alike show that the secret of good cultivation has been found. Both single and double flowers are grown. Among the latter I noted Conqueror, a double salmon of great size and substance; Avalanche, a wonderfully beautiful flower of an exquisite white and blush; and a

lemon-coloured one named Mrs. Jenkins.—S. ARNOTT.

Tritonia imperialis in S.W. Scotland.—The manner in which the Montbretias thrive and increase in the south-west of Scotland has given rise to an effort to grow the magnificent *Tritonia imperialis* as an outdoor hardy flower. It is to be hoped that the attempt to establish it will be successful. This *Tritonia* is, however, as yet too expensive to run much risk with, and so far as one can ascertain, those who have tried it in the open have deemed it prudent to give it some covering by way of protection. With this it appears probable that there are many gardens, not only in the south-west, but also along the west of Scotland in which it would be an acquisition. One of the gardens in which it is proving very satisfactory is that of Mrs. Maxwell-Witham, of Kirkcconnel, Dumfries. There was a nice clump in full bloom the other day. Those who know this *Tritonia* will be able to realise how pretty the dozen or more spikes looked. The protection afforded was that of about a foot of cocoa-nut fibre placed over the soil in late autumn and removed in early spring. The *Tritonia* is showing a tendency to increase at the root. One of the young plants which was coming into bloom was about a foot from the main clump, and I suggested to Mr. Harper, the head gardener, that it would be worth while to test the plant's hardiness by leaving this one uncovered.—S. ARNOTT.

Pentstemons at Kirkcconnel, N.B.—A dry season, such as this has been, is not very favourable to the full development of florists' flowers. Perhaps Phloxes, which naturally like a good deal of moisture, have suffered as much as any. Pentstemons have also been much the worse for the drought, and in many gardens, despite every care, have done badly. The fine collection at Mrs. Maxwell-Witham's was, however, in capital condition the other day when I had the pleasure of seeing it. The first spikes thrown up were quite spoiled by the dry weather and bright sun, but these were removed, and those which followed are now a grand sight indeed. The spikes are a little shorter than usual, but the individual flowers are as large as they are in ordinary seasons. It is quite a treat to see a collection such as this, which contains what one may call the *élite* of newest florists' varieties. Where there are so many of equal worth it is superfluous to single out individual flowers by name. With the Pentstemon, as with the Antirrhinum and some other flowers, the strains of seeds have been so much improved, that the time is approaching when few will care to grow named varieties. The old type of flower with its narrow tube has been superseded by the new varieties with open throat, nearly as large as a Gloxinia and beautifully marked. At Kirkcconnel there are several large beds and in the sun they were most magnificent. They are principally from Forbes' and Irvine's strain.—S. A.

Dr. S. P. Budd died, we regret to hear, recently. He was one of the most successful private Rose growers in the west of England.

Names of plants.—*Randolph Symons.*—You did not number your plants, and therefore we could not indicate their names.—*L. C. Foster.*—*Lycium barbatum.*—*B.*—*Bignonia* (*Tecoma*) *radicans.*—*A. E. W.*—1, *Keria japonica* fl.-pl.; 2, *Elæagnus* sp.; 3, *Erythrina crista-galli*; 4, *Skimmia oblata*. Crotons being so variable in leafage are very difficult to name with absolute certainty, but the specimens sent appear to be as below: 1, *Baronne James de Rothschild*; 2, *picturatus*; 3, *Schomburgkianus*; 4, *Chelonii*; 5, *Youngi*; 6, *Lady Zetland.*—*G. H. B.*—Your flower is *Dendrobium bigibbum*.

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THE GARDEN.

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INDEX.

(Illustrations in *Italics*.)

Orchard and Fruit:—		<i>Canna Alemana</i> 240	<i>Lælia pumila</i> 240	Ferns:—		<i>Dahlia Green's White</i> 251
Apples, late, falling 235	<i>Carnations, autumn, plant-</i>	ing 240	<i>Odontoglossum Londes-</i>	<i>Adiantums for the cool</i>	ternery 246	<i>Eucomis punctata</i> 252
Cherries, the 233	<i>Crinum Powelli</i> 237	<i>Dahlia</i> , awarding certi-	<i>Onclidium luridum</i> 240	<i>Adiantums on a wall</i> 246	<i>Lothian</i> 251	<i>Garrya elliptica</i> in East
Fruit trees, corrugated iron	<i>Dahlia</i> , awarding certi-	ates to new 238	<i>Peristeria elata</i> 240	<i>Fern spores</i> 247	<i>Heliopsis Pitcheriana</i> 251	<i>Hemerocallis aurantiaca</i> ma-
fence for 235	<i>Lilium Humboldtii</i> , varieties	of 237	<i>Pleuronthallis Rozdi</i> 240	<i>Gymnogramma schizophylla</i> 247	<i>Incavilleas</i> in Cornwall 251
Grapes, exhibition 235	<i>Lilium speciosum</i> 238	<i>Lilium Wallichianum</i> 239	Kitchen:—	Fruit and Vegetable	Crops 247	<i>Kniphofia</i> R. C. Affourtit 251
Melon Best of All 233	<i>Lilium speciosum</i> 238	<i>Nicotiana sylvestris</i> 237	<i>Lettuce Alexandra White</i> 242	<i>Kniphofia</i> at Biel, East	<i>Lothian</i> 251
Melons, canker in 233	<i>Lilium Wallichianum</i> 239	<i>Pansies</i> , tufted, propagating	<i>Cos</i> 241	<i>Onions, giant</i> 241	<i>Lothian</i> 251	<i>Lobelia Carmine Gem</i> 251
Peschies on back walls 235	<i>Nicotiana sylvestris</i> 237	<i>Pelargonium, tricolor</i> 238	<i>Potato Renown</i> 242	<i>Potato Syon House Prolific</i> 242	<i>Polygonum baldachuanicum</i> 251
Peschies, three good early .. 236	<i>Pansies</i> , tufted, propagating 238	<i>Potato Veitch's Maincrop</i> 242	<i>Punica Granatum</i> 251	<i>Romneya Coulteri</i> in North
Pears adopted by the Con-	<i>Pelargonium, tricolor</i> 238	<i>Physalis Franchetti</i> and P.	<i>Things, some, better omitted</i> 242	<i>Tomato Albert Victor</i> 242	<i>Wales</i> 251
grès Pomologique of	<i>Physalis Franchetti</i> and P.	<i>Alkekengi</i> 237	Garden Flora:—	<i>National Dahlia</i> 249	<i>Royal Horticultural</i> 251	Notes of the Week:—
France 234	<i>Ranunculus Lyalli</i> 240	<i>Romneya Coulteri</i> 239	<i>Rhododendron Little Beauty</i> 242	Week's Work:—	The Market Garden:—
Raspberries, cutting back	<i>Ranunculus Lyalli</i> 240	<i>Romneya Coulteri</i> 239	<i>Angulosa eburnea</i> 240	<i>Calanthe veratrifolia</i> 241	<i>Cypripedium grande</i> 240	<i>Dendrobium Dathousianum</i> 240
newly-planted 236	<i>Dendrobium Dathousianum</i> 240	<i>Dendrobium superbieus</i> 241	<i>Galeandra Baueri</i> 241	Flower:—	<i>Anemone alpina</i> 237
Vines, grafting and inarch-	<i>Anemone alpina</i> 237	<i>Anemone alpina</i> 237	Orchids:—	<i>Angulosa eburnea</i> 240	<i>Calanthe veratrifolia</i> 241	<i>Cypripedium grande</i> 240
ing 233	<i>Dendrobium Dathousianum</i> 240	<i>Dendrobium superbieus</i> 241	<i>Galeandra Baueri</i> 241	Flower:—	<i>Anemone alpina</i> 237
Chrysanthemums:—	<i>Anemone alpina</i> 237	<i>Anemone alpina</i> 237	Chrysanthemums:—	<i>Chrysanthemum Lady Fitz-</i>	wygram 236	<i>Chrysanthemums</i> — season-
<i>Chrysanthemum Lady Fitz-</i>	wygram 236	<i>Chrysanthemums</i> — season-	able notes 236	Flower:—	<i>Anemone alpina</i> 237	<i>Anemone alpina</i> 237

ORCHARD AND FRUIT GARDEN.

THE CHERRIES.

NEXT to Strawberries, Cherries at midsummer are the popular fruit, only, as in the case of the Strawberry, those who do not possess a garden do not know what a real ripe Cherry is like. They are usually gathered before they are ripe and are fleshless and hard. I have often wondered why food inspectors are so ready to drop on the vendors of over-ripe fruit and allow the bad unripe fruit to pass. At the present time, in the provincial towns, they are hawking perfectly green and utterly sour foreign Grapes about the streets at 2d. per lb., and they have apparently a good sale. One of the best Cherries for quality and crop is Knight's Black Heart. There are a number of Black Hearts, but this is the best one. I saw it some years ago dead ripe in June under a glass screen where the ventilation was always on, and the crop was not hurried in any way, and thought I had never tasted a perfect Cherry before. The May Duke Cherry is a well known kind, but why it should be called May Duke when it is at least a second early, coming into the market in July, I cannot imagine. One fruit merchant I know secured a lot of it this season only half-ripe in July. This is a red Cherry, but rather hard unless it is fully ripe and well grown. The White Hearts are also popular, at least in private gardens, but the fine black varieties are most popular for market. On the Rhine, between Frankfort and Bingen, miles of Cherry orchards seem to consist almost wholly of the black kinds of large size, which get ripe there about the middle of June. Bigarrean Napoleon is a White Heart, and said to be one of the best, if not the best, of its kind. All the Cherries are not abundant bearers, and the shy bearers are not worth planting. The Morello Cherry comes under a different category, being fit for preserving only, but a fine fruit for that purpose. It will also grow and bear in any position on a north wall or as a standard.

The culture of the Cherry is simple. It needs lime in the soil, but there are few soils that do not contain enough for its purpose, and I have seen good crops of Cherries in soils supposed to

be almost destitute of lime. The training is simple, especially as a standard. The trees need not be allowed to get crowded with branches, but shortening of the shoots is not necessary. Left alone they become a wreath of fruiting spurs, and there is no fear of the trees getting bare in the centre. I have grown trees that covered a wall about 40 feet by 15 feet in a few years. There is no fear of the Cherry as a wall tree getting thin at the bottom like the Peach. The long wand-like shoots inwardly break regularly their whole length, and if only disbudded and cared for become fruitful their entire length. The extension system should be adopted with all varieties, and a knife should not touch the leading shoots except to maintain balance. In this way a wall 20 feet high may be covered with standards with dwarfs between in about four years, and fruit may be expected the second year.

Root-pruning is really the only kind of pruning the Cherry requires, but it does not require much of that except in heavy soils, and the work should be done at the end of summer or in early autumn so as not to interfere with the next year's crop. It is bad, too late root-pruning that does that. In the fine German Cherry orchards the soil appeared to be sandy and light, and the standard trees were models, standing widely apart with other crops between. The heads of the trees were round and symmetrical on not very tall stems and the branches rather thin, but long and well spurred, the fruit hanging thick from every branch.

J. S. W.

Melon Best of All.—I fear this good Melon, like many others, is likely to be pushed into the background, as I do not now meet with it as frequently as formerly. Probably scarlet and green-fleshed varieties are more popular than the whites, but there are those who are partial to the latter; in fact, do not mind so long as the flavour is rich. For a few years one could scarcely go into a garden where Best of All was not grown. One sometimes wishes there were fewer new Melons, as the rage for novelties has a tendency to push really meritorious older sorts on one side. Best of All is a medium sized, handsomely netted, brilliant yellow Melon, and, given good treatment, a certain cropper. It has taken many first prizes

for flavour in strong competitions, and no variety secures a readier sale.—J. N.

Canker in Melons.—Mr. Burrell's note on canker in Melons is well worth reading; indeed, I have no doubt that many who have hitherto been troubled with canker will be induced to give the system Mr. Burrell recommends a trial. No doubt the theory that Melons the roots of which have free access to fermenting material which forms the bed often become gross before the fruit is sufficiently large to check it is correct, and this is the reason of so many fruits turning yellow when the size of hen's eggs. I have known other gardeners use Seakale or Rhubarb pots for growing Melons, and although, as Mr. Burrell remarks, a good deal of attention is needed in the way of watering and feeding when the crop is swelling, this is well repaid.—N. N.

GRAFTING AND INARCHING GRAPE VINES.

HAVING had considerable experience in grafting and inarching Grape Vines, a list of experiments which have proved successful may be of service to readers of THE GARDEN. One of the first was inarching Madresfield Court on to Bowood Muscat in an early viney where ripe Grapes were expected at the end of May. This stock proved most suitable, growth being vigorous and the bunches large, heavily shouldered, and of first-rate colour and flavour. Madresfield here never cracked, though no special dryness was preserved in the atmosphere, and I am of opinion that to be proof against cracking this fine Grape should be ripe not later than July. A second early viney suits it well. I also grafted Madresfield Court on to Black Hamburgh in a late house, but always had more or less trouble with the berries bursting and decaying wherever they pressed each other. I have found Golden Queen a capital stock for Duke of Buccleuch, and I would advise those who happen to possess a Vine of the former which is not satisfactory to graft it with the Duke. With ordinary care there will be very little spotting or cracking. With me Alnwick Seedling, a Grape which does not set well with everyone, seemed well suited with Trebbiano as a stock. The bunches set sufficiently thick to need a good deal of thinning, the only assistance given being a dusting over at noon with a hare's or rabbit's tail. Foster's Seedling is very suitable as a stock for Gros Colmar. This should be noted by those who have failed to colour it on its own roots. The finest berried and

coloured bunches of this noble Grape I have ever seen were on Vines inarched on Foster's. Foster's Seedling usually gives satisfaction on its own roots, but some of the largest bunches I ever grew were on a rod bottle-grafted on to Mrs. Pearson. That delicious Frontignan-flavoured white Grape Royal Vineyard, which many have been unsuccessful with, grew, fruited, and ripened most satisfactorily with me worked on Gros Maroc, setting being accomplished by drawing the dry hand down the bunches in the early part of the day in order to remove the watery globes, and dusting with a rabbit's tale at mid-day. This grafting or inarching one variety on another is often of great advantage where the vineries are small and room cannot be found for individual Vines. Sometimes I have had only a few laterals of another kind, and at others have cut the laterals clean off the parent rod to half its length, those of the grafted rod taking their place.

NORFOLK.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Continued from p. 175.)

LA CASTELINE (*syn.*, *Casteline*).—Originally obtained in 1835 by M. Florimond Castelain at Etampuis, near Tournay. The fruit is medium-sized, swollen at the base, slightly embossed in contour, the stalk of medium length, slender, curved, set rather obliquely in a narrow, deepish ribbed cavity; the eye large, open, in a wide, shallow depression; the skin rough, pale green, stippled and stained grey, rarely shaded red on the sunny side; the flesh yellowish, delicate, and pleasantly aromatic. A good fruit, maturing October—November. The tree is moderately vigorous and scarcely of average fertility. In cultivation easy to train in all forms, it only makes medium-sized trees. On the natural stock it is more vigorous, but the fruiting is too much retarded.

LA FRANCE.—Originally obtained in 1864 by M. Claude Blaochet, nurseryman, of Vienne (Isère). A fruit of medium or fair size, rounded conical, irregular, much embossed in contour. The stalk is stout, straight, in a deep, wide, and irregular cavity. The eye is medium, compressed, half open, in a narrow, deep, wrinkled and embossed cavity. The skin is green, or sometimes pale yellow, stippled grey, with smooth bronze stains at top, bronzy green on the sunny side. The flesh is white, very melting, and aromatic. A very good fruit, ripening October—November. The tree is vigorous and fertile. In cultivation this variety is suitable for all forms, especially on walls, owing to the profusion of slender branches. Graft on the Quince.

LE BRUN (*syn.*, *Baurré le Brun*).—Originally obtained in 1856 by M. Gueniot, of Troyes. It first fruited in 1862. The fruit is of fair size, very long, obtuse near the stalk, lumpy in contour. The stalk is stout, short, of medium length, set straight or obliquely on the surface of the fruit. The eye is medium-sized, half closed in a normal and irregular cavity. The skin is thin, greenish yellow, stippled tawny, stained tawny at the two ends. The flesh is yellowish, firm, luscious, and distinct in flavour. A good fruit, ripening October. The tree is fertile and vigorous. In cultivation this variety is vigorous and hardy on the Quince, but forms very irregular pyramids. The fruit should be gathered before maturity.

LOUISE BONNE D'AVRANCHES (*syn.*, *Bonne Louise*, *Louise Bonne de Jersey*, *Louise Bonne de Longueval*).—Obtained about 1780 by M. de Longueval at Avranches. The fruit is medium or fairly large, long pyriform, obtuse at both ends. The stalk is stout, of medium length, generally set straight and almost flush with the fruit. The eye is medium-sized or small, with erect sepals, set in a regular, shallow and wide cavity. The skin is smooth, tender, green on the shady side, yellow, washed carmine on the sunny side, stippled grey and tawny. The flesh is white, very juicy, distinct in flavour and aromatic. A very good fruit, maturing September

to October. In cultivation this variety is easily trained, fertile on all stocks, and adapted for all forms.

LOUISE BONNE SANNIER.—Originally obtained by M. Sannier, of Rouen. It first fruited in 1868. The fruit is small or medium-sized, pyriform, swelling at the middle. The stalk is of medium strength, long, set rather obliquely. The eye is open, set in a narrow, superficial depression. The skin is delicate, yellowish green, tinged salmon-rose on the sunny side, mottled and stained a little with russet. The flesh is yellowish, melting, and juicy. The fruit ripens October to December. The tree is vigorous and fertile. In cultivation this variety grafted on the Quince is suitable for all forms. On the Pear it would be too slow in fruiting, and its branches would be too close together.

MME. BONNEFOND.—Obtained in 1848 by M. Bonnefond, of Villefranche (Rhône). The fruit is large, rather of calabash shape, the stalk stout, long, curving, set rather obliquely on the point of the fruit; the eye large, closed; the skin delicate, light yellow, tinged green; the flesh white, greenish under the skin, very juicy and delicately aromatic. It is a very good fruit, ripening from the end of November to the end of December. The tree is vigorous on the Quince and very fertile. In cultivation this variety takes naturally the pyramidal form and lends itself to all forms, even standards.

MME. GRÉGOIRE.—Originally obtained in 1860 by M. Grégoire Nelis at Jodoigne (Belgium). It first bore fruit in 1860. The fruit is of medium size, short and rather hollowed out near the stalk. The stalk is stout and fairly long, set almost straight in a fold. The eye is medium sized, closed, in a narrow shallow cavity. The skin is yellowish green, much mottled and streaked with smooth bronze, yellow and marbled and streaked tawny on the sunny side. The flesh is yellowish white, melting, very juicy, with a distinct and very delicate sharpness. It is a good or very good fruit, ripening December—January. The tree is vigorous and fertile. In cultivation this variety naturally takes the pyramidal form and is suitable for all forms.

MME. TREYVE (*syn.*, *Souvenir de Mme. Treyve*).—Originally obtained in 1848 by M. Treyve, of Trevoix (Ain). It first bore fruit in 1858. The fruit is large, regular in contour, the stalk fairly stout, short, swollen at the point of attachment, set almost straight in a slight depression. The eye is fairly large, sometimes irregular and closed, sometimes regular and open, in a wide and rather embossed cavity. The skin is smooth, polished, pale green and yellow, mottled and streaked reddish brown. The flesh is white, richly flavoured, and very agreeably aromatic. A very good fruit, ripening August—September. The tree is of normal vigour on the Quince, of great and sustained fertility. In cultivation it behaves like Williams' Bon Chrétien, is easily trained, and suitable for all forms.

MARGUERITE MARILLAT.—Originally obtained by M. Marillat, of Villeurbanne, near Lyons, in 1874. The fruit is large, sometimes very large, more or less long, rounded on the upper half, somewhat abruptly narrowing and tapering to a point at the base, which terminates in a pronounced spur. The stalk is stout, fleshy, of medium length, curved, set obliquely against the spur. The eye is small, open, in a normal and irregular cavity. The skin is smooth, straw colour, stippled tawny, mottled red on the sunny side. The flesh is yellowish white, melting, and very juicy. A very good fruit, ripening September—October. The tree is of middling vigour and fertile. In cultivation this variety is suitable for all forms of small or middling dimensions. On the Pear it is more vigorous, and almost as early to fruit as on the Quince.

MARIE BENOIST.—Originally obtained in 1853 by M. Auguste Benoist at Brissac (Maine-et-Loire). The fruit is large, broadened and rounded on the eye side, obliquely obtuse near the stalk, which is short or very short, set obliquely towards the point. The eye is medium-sized, open,

in a deep, not very broad cavity. The skin is a light green, almost entirely covered with a warm tawny red, washed red on the sunny side. The flesh is white, melting, very juicy, and aromatic. It is a good fruit, ripening December to February. The tree is moderately vigorous on the Quince, of great and sustained fertility. In cultivation this variety, without having a strong growth, makes good pyramids on the Quince.

MARIE LOUISE DELECOURT (*syn.*, *Marie Louise*, *Marie Louise de Jersey*, *Marie Louise Duquesne*, *Marie Louise Nova*, *Marie Louise Van Mons*, *Van Donckelaer*).—Originally obtained in 1809 by the Abbé Duquesne at Cuesmes, near Mons, Belgium. The fruit is medium-sized, long, swelling above the middle, narrowing at the base. The stalk is stout, set sometimes level with the fruit, sometimes in an embossed cavity. The eye is fairly large, in a normal and regular cavity. The skin is smooth, oily, light yellow and green, stippled and streaked tawny, the flesh white, melting, and very juicy. A very good fruit, ripening October to November. The tree is of normal vigour on the Quince, of great and constant fertility. In cultivation this variety is little adapted to regular forms and prefers a trellis; it behaves well as a standard on the Pear in a sheltered position.

MARIE PARENT (*syn.*, *Ferdinand de Meiser*, *Surpasse Meuris*).—Originally propagated by M. Bivort, and identical with Surpasse Meuris obtained by Van Mons before 1818. It is a medium or fair-sized fruit, often irregular in contour. The stalk is slender, of medium length, set almost straight on the point or in a fleshy cavity. The eye is small, irregular, in a shallow, wide, embossed cavity. The skin is thin, golden yellow, shaded orange-red on the sunny side, and streaked and mottled tawny. The flesh is white, melting, rather gritty about the core, very juicy and aromatic. A good fruit, ripening October. The tree is vigorous on the Quince, of good and constant fertility. In cultivation this hardy species is ill adapted for regular forms.

MARTIN SEC (*syn.*, *De St. Martin*, *Martin Sec d'hiver*, *Rousselle d'hiver*).—Of very ancient and unknown origin. The fruit is small or medium, rather narrow at the base. The stalk is slender, long, set straight, or nearly so, on the point. The eye is medium, half open, set in a wide, shallow, embossed cavity. The skin is thin, golden, almost entirely tawny, more or less washed with brownish red on the sunny side. The flesh is yellow, fairly juicy, and highly aromatic. The fruit, which is good raw and very good cooked, ripens December—January, often later. The tree is of normal vigour on the Quince, of great and sustained fertility. In cultivation this variety is easily trained, and especially adapted for standards; it is of little value in dry, high soils.

MESSIRE JEAN (*syn.*, *Chaulis*, *Marion*, *Messire Jean blanc*, *Messire Jean doré*, *Messire Jean gris*, *Monsieur John*).—Of ancient and unknown origin. It is a medium sized fruit. The stalk is of normal stoutness, generally of middling length, set straight on the point or in a small crease. The eye is medium or fairly large, open, in a small cavity. The skin is rough, thick, bronzy green, changing to chamois, washed dull red on the sunny side and slightly mottled tawny. The flesh is yellowish white, crisp, juicy, richly flavoured, aromatic and agreeable. A good fruit raw or cooked, ripening November. The tree is of normal vigour on the Quince and of great and sustained fertility. In cultivation this variety is easily trained and behaves well, especially as a standard. The fruit must be watched, as it has a tendency to fall off.

NOUVELLE FULVIE.—Originally raised by M. G. Nelis, of Jodoigne, Belgium. It first fruited in 1854. The fruit is of fair size, long, pyriform and bumpy. The stalk is fairly stout, moderately long and continues the point of the fruit obliquely. The eye is medium sized, open, in a more or less deep and embossed cavity. The skin is rough, yellow, almost entirely brown, mottled and streaked tawny, stained red on the sunny side.

The flesh is white, melting, very juicy, yellowish and deliciously aromatic. A very good fruit, maturing December—February. The tree is not very vigorous either on the Quince or on the Pear. In cultivation this variety is difficult to train in regular forms. It is best to graft it and train it as an espalier.

OLIVIER DE SERRES.—Originally raised about 1847 by M. Boisbunel, of Rouen. The first fruiting took place in 1851. It is a middling or fair-sized fruit, Apple shaped. The stalk is stout, short, thick at the point of attachment, set in a deep and irregularly embossed cavity. The eye is large, irregular, in a more or less deep and irregularly marked cavity. The skin is delicate, tender, light yellow, much stippled a tawny brown, slightly stained russet. The flesh is white, delicate, very juicy, and deliciously aromatic. A very good fruit, ripening February—March. The tree is fairly vigorous on the Quince and of good and sustained fertility. In cultivation it behaves well, but requires care to keep it in a regular form.

(To be continued.)

PEACHES ON BACK WALLS.

MANY people have an idea that when planting a Peach case the trees do better on the wall than under the roof, but, as a matter of fact, it is surprising how seldom one finds good trees in such positions where the glass is unshaded. It is much better to plant in front, unless this is used for growing Tomatoes or some similar crop thinly upon. To leave the space of say 6 feet between the glass and the trees on the back wall is to court defeat, for the house gets much hotter in summer than is required, no matter how much ventilation is used. A light shade may prevent this to some extent, but I see no advantage whatever in planting on the back wall in preference to the roof. Red spider has always been a bugbear to cultivators who object to planting so that the leaves are close to the glass, but, as a matter of fact, I believe it to be worse in its attacks where the trees are on back walls. The reason, of course, is that the atmosphere is much more difficult to manage than when the trees cover the roof. The intervening space is always dry; whereas the slight shade thrown in spring and the heavier in summer keeps all moist. The only houses in which trees on the back wall are likely to do is in those where they are planted crosswise. This breaks the light from the back wall, but does not cause a heavy shade, while the sun has access to all the border more or less. This is the worst fault of houses arranged in the usual way, either span-roofed or lean-to, with trees on the roof. I am convinced that some cases at least of stone-splitting and other evils may be traced to a deficiency of light to the border. With regard to scalding, the first place it begins in properly ventilated houses is undoubtedly on the back wall. The night moisture there is not so readily dissipated as it is directly under the roof, while the sun pours in on the foliage with full force as soon as it reaches that aspect, and keeps on it for many hours. Another small point: the foliage is usually very hot when syringing is done in the afternoon, and chilled water is not always available, so a sudden check is unavoidable. Again, the water for the most part reaches the upper sides of the leaves, and it is very important that it should reach the under, where insects most congregate. This part is reached much oftener when the trees are on the roof, and this is why the foliage is usually cleaner there; in fact, all my observations of trees in both positions point the one way. H.

Grape Golden Champion.—In proof of the little demand which exists for the above Grape I may mention that a friend of mine who recently planted a Vine had a considerable difficulty in obtaining it, as so few nurserymen now propagate it. My friend used to grow it well in another garden and made up his mind to give it another trial. Could but its evil tendencies be overcome, Golden Champion would probably be

grown by everyone, as, independent of its very handsome appearance, large berries, and fine colour, it is really a good eating Grape, the flavour and texture being such as to suit most palates. When living near Birmingham many years ago I was accustomed to see it exhibited in splendid condition by a gardener living near Edgbaston. I have never since seen it so perfect in every way. When well grown and free from spot and blemish Golden Champion is indeed a noble Grape.—J. C.

Late Apples falling.—Please tell me what to do with my winter Apples. Bramley's, Rymer, &c., &c., are dropping from the trees without wind, I suppose in consequence of dryness at the root. Will they fail to keep if I pick them now? Of course windfalls soon spoil. I usually gather in October.—J. H. W. THOMAS.

* * The trouble you refer to is one that is much felt at the present moment in many gardens. If you gather late Apples now there is a great danger of their shrivelling, and if you do not gather you lose a goodly portion of the crop. Such kinds as you mention are best gathered next month. You may gather small portions of the best kinds to prevent dropping, and by so doing lighten your trees. These fruits could be used first, but they should have the coolest storage possible, and by lightening the trees the others will not drop. This is the best plan with trees heavily cropped, and you will by so doing lengthen the season and save many fruits from falling.—ED.

Exhibition Grapes.—I read that four out of the six varieties of Grapes in the twelve-bunch class at Shrewsbury were of high-class flavour, viz., Muscat of Alexandria, Muscat Hamburg, Black Hamburg, and Mrs. Pince. When a big prize is offered exhibitors must not expect first place with Grapes of the thick-skinned, inferior-flavoured kinds, as quality, size of bunch and berry and general finish being present, is sure to lead. Muscat Hamburg if in good form always takes the eyes of the judges, as they know that, independent of its unsurpassed flavour as a black Grape, it is only in a comparatively few gardens where anything like success is achieved with it. Mrs. Pince, I should think, would hardly be in a thoroughly ripe condition the third week in August, but here, again, good judges are aware that few Grape growers are able to lay a good bloom on to this variety. What those who plant Vines with the hope of exhibiting the produce need impressing on them is that quality, at least in collections of Grapes, is of as much, if not greater, importance than bulk.—J. C.

CORRUGATED IRON FENCE FOR FRUIT TREES.

I HAVE a fence (corrugated iron) with an east aspect, 9 feet high, 35 yards long. I am anxious to know if Plums and Cherries will do on this aspect, and if so, what sorts are best, and should they be cordons or fan-trained trees?—H. D. PALMER.

* * Yes; you may grow fruit trees on the fence named. We would prefer Cherries to Plums, but in your locality we think you have a fairly holding soil, and, if Plums do well in the neighbourhood, you will find them reliable. We think you could with advantage improve the corrugated iron by painting it over with black varnish or paint, as the iron gets so hot in summer and so cold in winter, and the paint prevents injury to the trees. How do you intend to fix your trees to the fence? You cannot nail to the sheet-iron, and, of course, the trees in any form will need supports. What we advise is wooden upright strips an inch thick and 2 inches in width. These should be screwed to the fence and then wires strained to these at a distance of 15 inches apart. The wires if you wish may be closer, but much depends on the kind of trees you grow. We certainly do not advise cordons for either Plums or Cherries. We think these are the worst kind of trees for this mode of training—for this reason, that unless young wood is laid in annually there is a poor crop of fruit, and this refers more to the

Plums than Cherries. Both fruit better when new wood can be laid in each season. Pears do well as cordons, also Apples. Plums need more room, or what is termed extension. Fan-trained Plums need much room, so that with your space you would not have room for many. For varieties we would advise Rivers' Stint, Czar, Victoria, Jefferson, and Coe's Golden Drop. There is no lack of very good Cherries, and most of them will give a good return grown thus. You could with advantage grow an upright cordon between two fan-trained trees, and the same with your Plums. This would fill every bit of wall space and also give you an idea which would be the best croppers. You may grow a cordon Pear between each set of fan-trained trees. The following are good Cherries grown in any form: Early Rivers, a fine black variety; Fregmore Bigarreau, a reddish yellow fruit; Governor Wood, a very reliable fruiter, with Napoleon Bigarreau, Black Tartarian, Late Duke, and the St. Margaret for late use. Plant early in November and not too deeply.—ED.

EXHIBITING FRUIT.

THERE can be no doubt that well-grown fruit always commands a greater share of attention at the hands of the public than any other part of a show. It is to be regretted that in so many cases very little trouble is taken to stage it in an attractive form. Grapes are among the most badly treated of fruits in this respect, and dozens of boards in long rows with their bunches hanging quite destitute of a vestige of leaf is not the best that can be arranged. It is on a par with the boxes of Chrysanthemum blooms, especially of the incurved kinds, that so often disfigure our autumn shows. Good fruit is so much more attractive in itself than the flowers referred to, that the mode of showing it is left to go on without protest, while in the case of the Chrysanthemums, exhibitors seem to be waking up to the fact that there is a more excellent way than that so long in vogue. In the collections of fruit, again, we get usually a couple of Grape boards at the back, a Pine and Melon possibly, the former often stuck into an inverted flower-pot covered with white paper, and the other fruits stuck about on plates. Nothing is done to make the whole attractive as a rule, while in such cases as the prizes for dessert tables at Shrewsbury the vases of flowers, small plants, and other accessories make too much of themselves, so to speak, and from a visitor's point of view the fruit takes a secondary place, and the individual dishes are packed up, each Peach and Nectarine exactly upright and looking as though turned out of a mould.

There are many better ways of showing fruit than these, and it would be well if the managers of shows would offer their fruit prizes contingent on collections being shown without papered Grape boards and dishes, leaving it to the exhibitors to arrange them as they thought best. Carefully carried, the Grapes could either be laid flat on a suitable base of leaves or suspended from stands, the latter being covered with Vine foliage, and where possible some of the wood of the Vine should be used. A little more trouble would be involved, of course, but the station each exhibitor has to fill could be worked out beforehand, the size, of course, being the same in every case and distinctly mentioned in the schedule. Any fruits from which wood and leaves can easily be spared should be always shown with their own foliage, and well-coloured leaves of Vines or Virginian Creeper with trailing pieces of Bryony or Ampelopsis Veitchi suggest very pretty effects. Wood wool could be used for making an undulating surface for the various fruits to rest on, and these could be displayed something in the

way they grow, not piled up like heaps of cannon balls. Figs often look messy when shown in a heap, but laid thinly at intervals, with trails of Bryony about them and green Vine or Fig leaves underneath, they have a much fresher look. I hope exhibitors will forgive me for mentioning anything that will add to the burden of show day.

H.

CUTTING BACK NEWLY-PLANTED RASPBERRIES.

FROM experience I am convinced that the practice of cutting back newly-planted Raspberries close to the ground is a wrong one, more especially when the canes are received from a nursery in a semi-dried condition. Many old gardeners used to leave about 2 feet of last year's cane when planting, and I believe if this were always done fewer failures would be heard of. It is also necessary, and particularly after a dry autumn, to well soak all purchased stock the roots of which are at all dry, as if planted in that condition they often go from bad to worse before rain comes, and either fail to start into growth or make weak, puny canes the following season. Instead of say a 2-foot length being prejudicial to a good and vigorous start the next spring, it really encourages it, as the eyes starting into growth induce root-action. As regards summer pruning, I am at one with "G. W." (p. 176). To those opposed to it I would say, why not cut out the old canes from Raspberries as well as that from Peach trees, the latter now a general practice, as soon as the crop is gathered? Not only does the foliage of the old canes throw off rain from the roots, but also obstructs sun and air, two necessary agents in thoroughly maturing the wood for next year's work. "G. W." mentions crowding even the new canes as a great mistake. Canes so treated may produce a quantity of fruit, but the size and general quality are sure to be inferior, besides which wet plays havoc by inducing rot in the fruit, the foliage where crowded remaining wet for perhaps several days together after heavy rains. Three or four to each stool is a good number, according to the variety grown and the richness of the root-run. Raspberries to grow and produce well must have plenty of moisture, and where liberal mulching in winter or early spring is neglected, partial failure is inevitable should the season prove dry. In limited plantations where watering is practicable, nothing pays better for liberal waterings twice during the growing season with farmyard liquid.

NORFOLK.

THREE GOOD EARLY PEACHES.

"G. W. S." does not agree with "R. K.," a Russian correspondent, in his condemnation of Amsden June, neither do I think anyone will who has given it a fair trial, has forced it gently, and gathered it in the nick of time. But, if I remember rightly, "R. K." asked for the names of a few Peaches that could be thoroughly relied upon to ripen at the end of May or beginning of June, in which case it is not necessary to have recourse to the American varieties at all, as some of the largest and very best-flavoured Peaches may easily be had in a ripe condition by then. Of course, the trees will have to be started sooner than either Amsden June, Waterloo, or Alexander, but very little heat is needed in well-glazed houses during December and January, and the labour is well repaid. For ripening at the date named I would place Early York, Stirling Castle, Early Grosse Mignonne, and Bellegarde in the first rank. I know some complain about the liability of Early York to split just when on the point of ripening, but for some years I had charge of a fine old tree which annually bore immense crops, only a fruit here and there splitting. When in full flower the tree was a perfect picture with its large, delicately-coloured blossoms. The fruit is of medium size, thin in the skin, and of delicious flavour. Stirling Castle is one of the most valuable Peaches ever introduced

and unsurpassed for forcing. In an old-fashioned house where the crop was expected to ripen at the end of May I used in trying, sunless seasons to experience some difficulty in securing a good set on some varieties, but with nothing more than a rap of the trellis to disperse the pollen, a capital set was certain on Stirling Castle. Its size, perhaps slightly less than Royal George, together with colour and flavour, is such as to please the most fastidious. Mr. Coleman once said to me Stirling Castle cannot be planted in the wrong place. Early Grosse Mignonne may be relied upon by "R. K." to come in at the date he names, and for all-round good quality would be hard to beat. I have never heard a fault found with this Peach, but planters must be careful to distinguish between this and the old Grosse Mignonne, which, although a splendid Peach, richer, perhaps, than its namesake, is a shy bearer and less suited for early forcing. Bellegarde is a grand forcing Peach, a regular and sure cropper, the individual fruits reaching a good size, which take on a dark, almost black-red colour, and are rich and delicious. Were I planting an early house, Bellegarde would certainly be included. No doubt Hale's Early, which failed to satisfy "R. K.," is a most useful Peach where it is at home, but there are gardens in which it has an annoying habit of casting its fruit.

J. CRAWFORD.

CHRYSANTHEMUMS.

CHRYSANTHEMUMS—SEASONABLE NOTES.

By the end of September it is well to get the plants under glass. This refers more especially to those cultivated for large specimen flowers. If once the buds get damp after they have advanced so that the embryo florets are noticeable the blooms are liable to be damaged. In most seasons a few sorts will be inclined to show colour thus early, and even now at the beginning of the month I have seen some Chrysanthemum blooms intended for exhibition quite advanced. These early blooms I have invariably found the most difficult to open, free from damp spots, and they require considerable care when placed under glass. Later there is not much trouble—that is, if ordinary care be given. Hot sunshine in the day and cool nights have something to do with damping in the case of early flowers, for it is really not yet the season for them, but in the desire to obtain large size a long time must be allowed for development. If, then, blooms are opening now, I would stand the plants so that the flowers are as far as possible from the glass, and also well shade the latter. The doors and ventilators should be open night and day, the roots also kept moist.

In housing the bulk of Chrysanthemum plants the arrangement will be according to the convenience of each grower, and it is astonishing what positions one sees them in at times. Airy span-roofed greenhouses suit the blooms when opening best, because such houses can be kept cool and dry. Often the plants are overcrowded when put under glass. This should be avoided as much as possible. When stood close together in groups for effect the plants soon lose the lower leaves, which must have some detrimental effect on the opening blossoms. I would take away all decaying foliage at the time of housing, and examine each plant as to its freedom from disease. Mildew is usually observed at that time. If so, the parts affected may be dusted with sulphur, and if possible all structures should be fumigated when the plants are all under glass. There is sure to be aphid lurking

about, and this must be destroyed before the flowers are advanced. If left, this pest has a habit of coming in such numbers later when fire-heat is employed that it is not easy then to deal with effectually. The blooms open best with plenty of air and little fire-heat. The latter may be used to dispel moisture, but not for the purpose of forcing the flowers. If so, it is at the expense of colour as well as substance. Shade is necessary, more especially in regard to kinds with white, crimson, and bronze flowers. These appear to damp the most readily. It is in the early part of the day when the mischief is done. The sun is apt to come into contact with the florets whilst they are cool and moist through long hours of darkness; therefore make it a rule to shade Chrysanthemums coming into bloom quite early in the morning. Nothing conduces so much to well-finished blooms as encouraging top roots. This may be done by sprinkling some fertiliser on the surface of the soil during showery weather and by continuing the practice after the plants are under glass. Guard against an over supply; little and often is the safer rule. Why growers should be more liable to overfeed Chrysanthemums than other plants I do not know, but certainly a great many mistakes are made in this direction. Another error is likely to be made just at the time a wealth of fine flowers is looked for—that is, roots are lost through bad watering when under glass. A good soaking must be given when watered at all; not surface moisture only, which deceives the cultivator and causes the lower portion of the ball of earth to become dry; hence loss of valuable feeders.

Recent showers have helped early-flowering kinds, and a fair display of bloom will yet be had. Some of these early kinds make admirable subjects for lifting and placing into pots. The flowers, of course, come cleaner under cover, and the specimens may be employed for greenhouse decoration. Mme. Desgrange and G. Wernig, white and yellow, are two kinds suitable, because they suffer little by the process. Bushy-habited sorts like these produce their roots in an equally bushy way, and a nice ball of earth clings to them. This rule of bushy top growth pertains to all Chrysanthemums that lift well. I have found those of a loose-growing nature useless for the purpose. I plant out a number of all sorts for providing cuttings; some give a capital crop of bloom, too, after being lifted, whilst the majority refuse to open the flowers at all. Harvest Home, Mme. Marie Masse, Flora, Blushing Bride, and the bronze variety, besides the two kinds already named, are the most satisfactory September Chrysanthemums with me this year. Others will follow later, provided early frosts do not spoil them.

H. S.

Chrysanthemum Lady Fitzwygram.—This chaste flower seems likely to find favour as a pure white sort for market work as well as for cutting, judging by the quantity and quality of the blooms now seen in so many florists' windows. It is sturdy and of dwarf habit of growth, capable of developing some ten to a dozen capital blossoms on plants in small pots. In some establishments this season the plants were potted up into 5-inch and 6-inch pots, and afterwards plunged outdoors. These plants made rapid progress, and were quite recently lifted and placed in a cool house with abundant ventilation. For the past few weeks the display of blossoms has been very welcome. Growers of this variety make a mistake in growing it in a manner similar to that followed with Mme. C. Desgrange, and, given such treatment, the result is not so good as when the plants are disbudded to about a dozen flowers.—D. B. C

FLOWER GARDEN.

ANEMONE ALPINA.

THE alpine Windflower is without doubt one of the rarest of all the Windflower family to be seen in British gardens in anything like good established examples 2½ feet high and as much through, yet it is not a difficult plant to cultivate. The real difficulty lies in the establishing and in making good plants of the scrappy material which is from time to time furnished. The collectors of hardy alpine and such plants doubtless find a difficulty in digging up this plant with anything like an adequate amount of root fibres attached to it, and without these it is difficult to succeed in making the plant even live out the first year after having been collected. These small, unsuitable pieces, which in reality are but the crown and the root stumps attached, all the more surely perish if planted at once in the garden soil. No matter whether this is specially prepared or otherwise, the plant will seldom come through its first winter in this country alive. To attain success I know of no better way than by bedding the imported root-stocks in damp cocoa-nut fibre and coal ashes or the first named alone. In both these I have secured a far larger proportion of living plants than when the plants have been put into soil in the garden. To those desirous of establishing this handsome subject in their gardens I would suggest giving an order early in the year for a supply of a dozen or two or more according to their requirements. Not that all may be required, but with a view of establishing at least a few. When the plants arrive, take some cocoa fibre and coal ashes, equal parts, and fill a 3-inch box, inserting the tufts of plants quite firmly in rows in the boxes at a little distance apart. Do not in any way bury the crowns, but rather let them appear well above the surface. Give one good watering to thoroughly soak the whole body of material and afterwards a little once or twice a week. The plants should remain in the boxes all the first winter, placing them together and surrounding with ashes in a good open position. If a large number of plants are received it will be best to separate into two or more sizes, for the largest pieces are the most likely to perish if unaccompanied by fibrous roots. These latter, indeed, are best treated at once as root cuttings, placing them in a close, warm and shady position in the greenhouse. It will, however, be best to take away the top if this at all shows signs of decay, which will if left only follow downward to the root itself. Insert these root pieces again either in boxes or pots in the same material as above suggested. It is the medium-sized plants with a few root fibres that will be more likely to grow and succeed in our gardens, and this irrespective of soil. A very good plant of this handsome Windflower was among the good things brought to the recent Temple show. This had something like a dozen flowers upon it. The finest example I have ever seen, however, was growing in the specimen border at Hale Farm Nurseries, Tottenham, nearly twenty years ago. This must have been fully 2½ feet high and quite as much in diameter while teeming with its handsome flowers. Of course such a specimen must have been some years in the position, for the tuft alone was a giant, to say nothing of its development in full growth. As a rule, however, the most we see of this fine hardy plant is a small scrap in a 3-inch pot with a single flower or so, though occasionally plants of this and the sulphur form may be seen with two or three.

To those who can afford to wait, the raising of seedlings is a good way, perhaps the best way, to secure vigour, and if freshly gathered seeds were sent home by those visiting the mountain pastures where this plant luxuriates, much less difficulty would be found in obtaining supplies. The seeds may be sown—indeed are best sown—early in autumn quite thinly in drills in the open and in well prepared soil. Equal parts of loam and leaf soil, with a fourth of finely sifted and old manure, with plenty of grit, will do well. Select a rather sheltered place where the seed bed will not suffer extremes of dryness, and with the same object when the seedlings appear place a few boughs over the bed. Many seedlings will appear in the spring following, and these when eighteen months old should be transplanted to a permanent bed, given at least 2 feet of soil of a similar character, though rougher and it may be richer. Abundance of root moisture for the growing season must be secured to these lovely alpine plants in so far as is possible the great mantle of ever-melting snow that in their mountain home keeps them at all times



Anemone alpina. From a photograph sent by Miss White, Dublin.

cool at the root. It is in this respect that we fail with many of the choicest—albeit they are often the dwarfest—of the genus of alpineregions. A good plant of this alpine Windflower is given in the illustration. Internally the flower is white, and externally it is covered with a silken down of an azure-blue tone. This and the larger and more deeply cut leaves render it distinct from all else in the Windflower family.

E. J.

Physalis Franchetti and P. Alkekengi.—Both these are very useful in their way, but P. Franchetti, though bearing larger flowers, is not so deep red in colour. Too frequently these winter Cherries are grown too thickly, which is one of the very worst things in connection with their culture. Crowded growth prevents the ingress of light and air; the lower portions of the stems are consequently bare of flowers, or the berries that do set either rot away through excess of moisture or fail to colour well. A good loamy soil of fair depth, plenty of room between the individual plants, restricting the number of shoots to some four, or at the most five, on each plant, liberal mulching and abundant moisture are the

principal cultural details to be observed in order to ensure tall, well furnished stems and brilliant flowers. A good effect is produced by mixing them with white Honesty.—N.

Nicotiana sylvestris.—This handsome Tobacco is mentioned at p. 194 of THE GARDEN, but I think its full value has as yet hardly been ascertained by the writer of the notes referred to. In my own opinion, both for foliage and flower this recent introduction surpasses all others. It is handsome in its foliage and also one of the grandest flowering members of its race. Quite recently I saw it in splendid condition at Gunnersbury House, where Mr. Hudson has a line some 70 feet in length, the plants being in prime condition and forming quite a sheet of white flowers. The foliage is of great proportions, and the plants naturally break into several strong sheets from the ground level. This is so conspicuous and so helpful to the plant where grouping for effect is the chief aim, that I wondered whether all the stems had sprung from a solitary seed. Indeed, it occurred to me that two or possibly three small plants, having been pricked off together in one pot, had been thus transferred to the ground without mere ado. I found, however, that all the plants were solitary examples, and as such bedded out in their present places. Now there are perhaps an average half-dozen stems to each. The long tubular white flowers, which droop slightly in the daytime, but do not close, as in some other species, appear in the greatest profusion. To this testimony of its worth may be added the fact that the Gunnersbury plants are about 6 feet high. Easily grown, yet enjoying liberal treatment, it is obviously a plant that will be grown extensively in the near future.—E. J.

Crinum Powelli.—If only the fine, handsome proportions of this plant and its way of taking care of itself in a suitable border were better known it would surely be more often grown outside. The tubers are—as most people are aware—very large, and naturally the tops of these should be kept a little below ground, so that a fairly deep border must be made for it, unless such a one exists in the natural soil. I remember seeing a number of bulbous plants of this class in Canon Ellacombe's fine garden at Bitton, near Bristol, some years ago, and I should think that the deep loamy soil of the neighbourhood there had something to do with their success, while the sheltered position was also doubtless in their favour. C. Powelli is equally useful as a fine greenhouse subject; in fact, the Crinums as a whole are sadly neglected, and if offered for sale, as they sometimes are, they seldom fetch anything like a fair price. I saw a very pretty Crinum recently with Mr. H. Rider Haggard, at Ditchingham Hall, Norfolk, an unnamed plant that he received from the Cape, and there are many more equally good. But these with a sheltered garden and good deep soil may get beautiful effects by their use outside.—H. R.

Varieties of Lilium Humboldtii.—I have in THE GARDEN several times called attention to the marked difference in the behaviour in cultivation of the varieties of Lilium Humboldtii, and my experience in my Lyons Valley Lily garden this season only emphasises my opinion. The conditions in my garden in the mountains seem to suit all Pacific coast Lilies, and I may say all other

Lilies that I have so far tried. This year I had three lots in parallel rows, a thousand or so of each. Soil and situation were as nearly as possible identical, and healthy bulbs of various sizes were planted. The typical *L. Humboldtii* collected in the northern and central portion of the Sierra Nevada Mountains was planted in November last. A little later *L. Bloomerianum* or *L. Humboldtii* var. *ocellatum* went into the ground, and in December a lot of *L. Humboldtii* var. *magnificum* of all sizes, from 4 inches to 10 inches in circumference, was planted. From the typical *L. Humboldtii* I had not one bloom, and I can say further that of fully 3000 planted last autumn and winter not one flowered. *L. Humboldtii* var. *ocellatum* is a dwarf variety, seldom over 2 feet high, with circles of red around the dark spots on perianth. The bulb is very small. It flowered very well; probably 40 per cent. were in bloom by July 5. Of the *L. Humboldtii* var. *magnificum* fully 90 per cent. flowered. The stalks were stout, perfectly healthy, 3 feet to 6 feet high, and as many as twenty-five flowers to the stalk. In another part of my garden there were rows containing 2000 *L. Humboldtii* type, very fine bulbs, planted in the autumn of 1897. These flowered splendidly, but did not produce any greater percentage of bloom than strong plants of var. *magnificum* planted in March last.—C. PURDY, Ukiah, California.

TUFTED PANSIES.

PROPAGATION BY CUTTINGS FOR SPRING PLANTING.

THROUGHOUT September and October propagation of the Tufted Pansy may be carried on with every prospect of success. At this season, therefore, readers should be busy making preparations for the insertion of cuttings of a desirable kind, and these are obtained on plants which were cut back a few weeks since and are now 2 inches to 3 inches in length and nicely short-jointed. Any reader who has seen the display that a few massed plants are capable of making will at once appreciate the array of colour which a larger number of plants will produce, especially if a wise choice of colours be made. Although recent summers have been exceedingly hot and dry, and the display made by the Tufted Pansies has been more difficult to retain, this fact should not discourage prospective growers. A little more than ordinary thoughtfulness in the selection of a suitable position for the Pansies is amply repaid by the display they will make. There are very few subjects, especially of a hardy character, that can compare with the Tufted Pansy, both for its long and continuous blossoming propensity as well as the charming variety in which this beautiful flower is now obtainable. The Tufted Pansy may be kept in a healthy condition, and in the autumn each plant will give numerous cuttings by which the different varieties may be perpetuated if they are planted in garden soil which has been deeply dug and well manured in the winter or early spring. If, in addition, the soil is constantly stirred by the frequent use of the Dutch hoe, and a good mulching with some light gritty material given during June, the display is pretty certain to exceed the grower's expectations. During long periods of drought an occasional watering, and this of a copious character, may be applied with advantage.

At this season the cutting bed or cold frame should be placed in a warmer position in the garden than that selected for the earlier propagation. A southern or south-western aspect is the best position for autumn propagation, as then the frames obtain whatever influence the sun may impart. In very open, cold and bleak situations the use of cold frames offers many advantages. The Pansy will root in almost any soil, so hardy is its constitution, but the rooting process is much more readily accomplished if a nice depth of light gritty material be made up for the purpose. Place in the frame, to the depth of say 6 inches, loam, leaf-soil and sand in equal proportions, thoroughly mixed, after being passed through a

sieve with a half-inch mesh. This should be carefully levelled all over and slightly firmed by placing boards over the surface, gently pressing these before removing. Some few hours before the cuttings are to be inserted, the soil in the frames should be thoroughly watered by the aid of a fine-roset can. Left thus for a few hours the soil comprising the cutting bed becomes nicely moistened and the work of propagation may then be carried out easily and expeditiously. It may be impossible for some readers to obtain the ingredients for the cutting bed as laid down above, and on this account they may be deterred from taking the Pansies in hand. By the addition of coarse road grit or sand to the ordinary garden soil, however, the cuttings will be found to root readily enough for most purposes. If in addition to the last-mentioned soil the siftings of the potting shed accumulations may be added, a satisfactory mixture may be made. Cuttings should be made about 2½ inches long, and these should be sturdy, short-jointed, and free from insect pests. Clean, healthy cuttings root very quickly during the cool weather. To make a cutting, the stem should be cut through with a sharp knife immediately below a joint, and the leaf adhering to the latter carefully trimmed off. The cutting is then ready to be inserted. These should be dibbled into holes about 2 inches apart, and nicely firmed at the base by a gentle pressure. They also should be inserted in rows about 3 inches apart, this affording ample space to lift them with balls of earth when bedding out in the spring. When commencing, first place the label at the head of the row, and repeat this as each variety is taken in hand; thus confusion of names and varieties is avoided when planting out. It is useless to insert stem cuttings. These rarely root satisfactorily, and even when they do, the plants lack the vigour which cuttings of recent growth invariably produce. Should warm weather unexpectedly prevail, the cuttings must be shaded by the use of tiffany, &c., removing this in the late afternoons. I do not advocate keeping the frames close, as it should be the aim of the grower to accord it hardy treatment. The cuttings may be sprinkled overhead occasionally to freshen them, and the soil between the rows also stirred from time to time. D. B. CRANE.

Violet California.—Violets seem to be one of the specialties in the gardens at Terregles, Dumfries, N.B., and Mr. Mackinnon, the head gardener, grows them well. All were the picture of health, but I was particularly struck with the vigour of California, which is grown in quantity. The flowers are largely used. The plants are lifted and put into frames in October and give flowers over a long period.—S. A.

Tricolor Pelargoniums.—With a few such summers as the present it is very probable that some of the tricolor Pelargoniums would figure more prominently as bedding plants than they have done of late years, for in many instances they have acquired a brilliancy of colouring such as we seldom see. The variety Mrs. Pollock, which thirty years ago attracted so much attention as a bedding plant, still holds its own as one of the best for the purpose, being more robust in constitution than some of those with richer tints. Some of our nurserymen were not slow to take advantage of the craze for these Pelargoniums, the catalogue of a nurseryman for the year 1870 containing no less than seventy names, but the number of distinct varieties is at least doubtful, for the tendency then, as now, was to publish too long a list of names of any popular plants. While many of the richest coloured proved too delicate for bedding purposes, they became popular for exhibition, and classes for both gold- and silver-leaved tricolor Pelargoniums used for years to figure on many schedules. The plants needed very careful treatment, light, air, and sunshine being very necessary to success. To grow these Pelargoniums at their best it is necessary to be careful with the water-pot. During the winter they need a light position and a fairly dry atmo-

sphere, with rather more warmth than the other sections of Pelargoniums. A minimum of 45°, to run up another 10° or so during the day, will suit them well. Plants that are thoroughly established in comparatively small pots will pass the winter in the best condition. As pure air and a good light are very essential to the tricolor-leaved Pelargoniums, it follows that they are not seen at their best in the immediate neighbourhood of London; indeed, the difference in colour between the leaves of such plants and those grown on the open downs of Surrey, Kent, and Sussex is so pronounced, that they might be mistaken for distinct varieties.—H. P.

LILIUM SPECIOSUM.

THIS Lily has, of course, flowered earlier than usual during the present season, and while the blooms have in most cases been well developed, they quickly lost their freshness and dropped, owing to the great heat. The first variety to open with me was *album novum*, a white flower much in the way of the better-known *Kratzeri*, but with bright yellow anthers, while those of *Kratzeri* are brown. The album of the Dutch cultivators—that is, the form with mahogany-coloured bulbs and chocolate-tinted buds—has the flower sometimes slightly tinged with blush. I think this feature has been a little more pronounced than usual during the present season. Of the Japanese importations the variety *Melpomene* holds its own as the most beautiful of all the deep coloured forms, being in richness and depth of colouring much superior to any other. The rounder and more massive leaves, with their depth of colouring, are also characteristic of this variety. The form sold as *rubrum* by the Japanese, which is taller than *Melpomene* and the flowers rather larger, is also much lighter in colour. The leaves, too, are thinner in texture, and are far more liable to die off at the base than those of *Melpomene*. Huge numbers of these varieties imported direct from Japan are sold every year in this country, but those disposed of at the large auction sales cannot always be depended upon to be true to name. The bulk, as a rule, consists of the variety as sold, but with *Melpomene* there is generally a sprinkling of *rubrum*, and the reverse also holds good. A great many may be selected with almost absolute certainty by means of the bulbs, which in *Melpomene* show a much greater tendency to divide up into two or three crowns, and they are also deeper tinted than the other. Intermediate forms, however, crop up among the bulbs, and for these it is necessary to wait till growth commences. The roundish deep-coloured leaves of *Melpomene* are then very different from the long pointed ones of *rubrum*. H. P.

Awarding certificates to new Dahlias.—I note the remarks of "A. D." (p. 217) in reference to new varieties, and I think with that writer some better method should be adopted by the National Dahlia Society than that which obtains now. In the first place it would be well if the deliberations of those persons selected to award certificates could be done without the public looking on. A looser way than that followed by a large committee of not disinterested persons standing together and voting, as was done at the Crystal Palace, could not well be imagined. Of course, trade growers have excellent chances of knowing individual varieties, but it would be possible to get three, or say five, keen amateur cultivators to do the work in a way that should benefit the general buyer of new kinds. When five certificates are awarded to the same raiser at one time it does appear that improvement is going on at a rapid rate. But at least from past experience I have found no end of disappointments in growing varieties through such having obtained that hall mark of excellence. Like your correspondent, I saw the new kinds, and did not note more than two or three distinct enough to be added to our collections. There are many others, however, who must follow

the records in gardening papers. It is they who will eventually be tired of buying so many new flowers only to find them inferior to the old. New types like Whirlwind, and distinct colours as in Zephyr, are those which want encouraging. Red Rover, too, passed as being over large, is a new variety that will not require a certificate to make it a popular garden plant.—VISITOR.

ROMNEYA COULTERI.

THERE is no more lovely flower in the July garden than this exquisite Californian Bush Poppy. The snowy petals of the large single blossoms, many of them over 6 inches in diameter, with their delicate creases, put one in

west of England and in the south of Ireland, and I have seen it in the best of health as far north as Herefordshire. Perhaps the most suitable situation that can be chosen for it is one in a deep border backed by a high wall, although it may often be seen doing well in the open border. It also forms handsome specimens when grown in tubs, but as it is most impatient of root-disturbance, great care is necessary in shifting the plants into larger receptacles. Especially is this the case with seedling plants, which often succumb to the operation of potting-on, however carefully this is carried out. For this reason it is well to sow the seeds, which often take a long while to

and often attain a stature of 9 feet or more. Plants that have occupied the same position for two or three years often throw out shoots a yard or more distant from the parent stem.

In severe winters a certain amount of protection is necessary, and it is always advisable to mulch the roots with some light and porous material, such as Pine needles, rough coconut fibre, or, failing these, ashes. During hard frosts a temporary covering with an Archangel mat will generally afford sufficient protection to preserve the ripened shoots from serious injury, but sappy, autumnal growths from the base of the plant usually succumb to the effects of continued severe weather. Under no circumstances should the plant be closely surrounded with heavy mats, hurdles surfaced with straw or Bracken, or with other materials that have a tendency to become sodden and create a moist and stagnant atmosphere around the specimen, or the foliage will be apt to become a prey to mildew, which will eventually affect the shoots and root-stock and result in the death of the plant. During the severe weather in the early part of 1895 not a few specimens were destroyed, the loss of certain of which was undoubtedly due to the coddling system already referred to. In the summer months the *Romneya* is benefited by copious supplies of moisture, while occasional applications of weak liquid manure and soot water will be found to promote vigorous growth. *Romneya Coulteri* may be propagated by root cuttings and layers, though even by these methods its increase is far from easy, while cuttings of the shoots almost invariably refuse to strike, although they will often remain green for a lengthened period.

S. W. F.

LILIUM WALLICHIANUM.

ABOUT five years ago, so far as I can remember, I received a consignment of bulbs from a friend—Captain Grant—in Upper Burmah. Amongst the number there were several good specimens of *Lilium Wallichianum superbum* (see page 187). As it was not then convenient to grow them in a greenhouse, I put these Wallichianum bulbs in a Rhododendron bed and hoped for the best. I remember having a good deal of misgiving about the result, but I could do nothing else. Contrary to expectation, however, in a great degree these Lilies have done splendidly; they have been objects of great admiration and they have shown themselves—at all events in the Isle of Wight—to be hardy enough. I have been away from home so much during the last eighteen months, that I do not know so very much about them. My idea about them has been that there are few Lilies which are so very handsome and at the same time so easy to manage. I have also read with interest what your correspondent “W. J. H.” says about

EREMURUS ELWESI

at Alnwick. He is to be congratulated on his success, but I cannot quite follow him when he speaks of his “being a climate which is unsuitable to it.” If the climate of Alnwick is at all what I imagine it to be, there is no ground for surprise. *Eremurus* manifestly do well in somewhat cold and bleak places. Their headquarters in England is in the garden of Sir M. Foster near Cambridge—in his hands they are indeed a sight to see—and also they do extremely well with Mr. Carrington Ley in a cold part of Kent. A part of the world which from one point of view does not suit them is the Isle of Wight, and the reason for it is because they are excited into growth far too soon and have but a short time to rest. The only way to obviate this is by deep planting, and I can quite understand that they would like Alnwick better than Ryde. Mr. Hindmarsh seems to be on a level, so far as they are concerned, with Sir Michael Foster and Mr. Carrington Ley.

I notice Mr. Arnott's recommendation of *Leucojum autumnale*, and there is plenty of room



White Bush Poppy (Romneya Coulteri).

mind of the finest white crêpe and flutter at the slightest breeze, while their purity is enhanced by the superb bosses of golden stamens from which they radiate. When a large quantity of these striking blossoms is expanded at the same time, as is seen in the accompanying illustration, an effect is produced that will not soon be forgotten. Beautiful as are the flowers, they possess another attraction besides that of loveliness, since they are dowered with a subtle and delicious fragrance, which, added to their refined form and purity of tint, renders them especially acceptable for indoor decoration. The plant generally does well in the south-

germinate—ten months elapsing in one case that came under my notice before any sign of growth appeared—singly in small pots, so that as growth advances they may be shifted on with the ball of roots intact. Even in putting pot plants out into the open bed considerable care has to be exercised not to disturb the roots unnecessarily, lest the plants receive a check that they may take some time to recover, some specimens losing a great proportion of their leaves even where the ball of roots has been left undisturbed. When once thoroughly established in the open ground, however, the plants soon make rapid headway

for it; but I should like to recommend him another *Leucojum* which, in my opinion, throws his favourite into the shade—I refer to *L. roseum*, which is one of the sweetest, daintiest little plants I have ever seen. It blossoms at Ryde in July, and has a most bewitching appearance, which cannot easily be forgotten. I have only seen it once in my life, and the tender pink markings of the little bells are so very striking, it stands quite by itself. I can only express what I mean by saying that I should call *Leucojum autumnale*—very nice though it certainly is—commonplace by its side. But now comes the difficulty. *L. autumnale* is very easy indeed to manage in the Isle of Wight. *L. roseum* I find to be excessively difficult. Though a good deal of care has been lavished upon it, once, and once only, during the last fifteen or sixteen years has it blossomed in my hands—it was soon after I got it—but since then I have not been able to make anything of it, though I believe I still have it in a frame. *Leucojum roseum* stands so very high in my esteem, that I should be immensely obliged to Mr. Arnott, who seems to do many things so well, if he could put me on the right track with regard to it or help me in any way.

H. EWEANK.

CARNATIONS—AUTUMN PLANTING.

I WOULD advocate autumn planting in preference to waiting until spring, unless the layers are potted up and protected by glass during winter. Last year I allowed many of the layers to remain on the old stools and planted in spring. They were severed and every care taken to remove them with a good ball of earth, but neither in the matter of flowering and in the ultimate strength of the grass did these bear comparison with others that were removed in October. I came across an article recently penned by an old florist wherein it is stated that one may mutilate a Carnation as one wishes up to January, but after that time the plant will resent any disturbance at the roots. There is truth in this. In the spring of the present year plants of choice Picotees were purchased from the north out of pots, and when they arrived I was delighted with their healthy appearance. After duly potting and nursing the same they absolutely refused to move, but instead gradually went from bad to worse until all have died. With the more hardy kinds there is nothing gained by potting, but I have not seen a locality yet where it is safe to leave the more tender ones, such as yellow ground and white ground Picotees and the bizarre Carnations, in the open ground all the winter without risk of spot. This is doubtless caused by damp, and the same danger is with us if we coddle the plants in frames. To have all about them dry during wet weather is what Carnations need. I am sure, however, that, whether for planting or potting, it is best to get the layers rooted early and sever them from the old stocks in autumn.

This summer has been none too favourable for layering. Mine were watered twice a day, but since the welcome showers have come rooting has taken place with great rapidity, and capital young plants are obtained before the autumn is far advanced. Nor has the maggot been noticed. This pest should be watched, for as winter comes upon us there is pretty certain to be some sort of an attack, and it rests with the cultivator whether or no much damage shall be done.

H.

NOTES AND QUESTIONS.—FLOWER.

Canna Alemanaia.—This new variety is a noble-looking one. It grows tall, throwing long spikes of flower upwards of 6 feet high. The flowers are unusually large for a *Canna* and are circular in form. It is richly coloured, crimson and yellow being well blended. I saw plants of this in bloom arranged here and there among Palms in a conservatory, and most effective they were. This sort should become widely known.—H.

Ranunculus Lyalli.—In regard to Mr. Arnott's note about *Ranunculus Lyalli*, if he has not succeeded with it I am afraid there is little use in some of us

inexperienced growers attempting it. Some years ago I procured a plant and gave it a sheltered and pretty dry place in the border facing south. It never seemed at home, did not flower, and next year was dead. I had not a very good plant to start with, but Mr. Chapman, at East Duddingstone Lodge, had a very good one. It flowered splendidly and seeded also, but next spring was dead too. I twice had seed from New Zealand, but, like other seeds from that country, it refused to germinate. The Lily grows in stony places in its native country, but it must either be an annual or else we have not yet found its proper treatment.—J. L., Hawick, N.B.

ORCHIDS.

LAELIA PUMILA.

THIS is well known to be a variable kind, but all the varieties are pretty and effective, lasting well in flower and blooming, moreover, at a useful time. Their culture has been attended with a good deal of uncertainty, many experienced growers doing little good with it, while occasionally one came across fine specimens. One of the worst mistakes in the culture of *L. pumila* was, I believe, the placing of the plants in such receptacles that they could never reach the outside of. It is useless to treat such plants as *L. pumila* as if they were *L. purpurata* or *L. elegans*. Their individual wants have to be studied and catered for, and one of the wants of *L. pumila* is a thorough and effective hold upon the home of its adoption, no matter whether this is a piece of Tree Fern stem, a pot, basket, or what not. To obtain this it is necessary in the first place that everything in the way of compost and drainage is thoroughly clean at the beginning. To place a healthy plant in semi-decayed peat is useless. Having, by means of suitably sized receptacles and good compost, given them this hold, they are all right in this respect, and will probably not need serious disturbance at the roots for several years to come.

Then the question of temperature comes in, and I believe it is a mistake to keep *L. pumila* in either a hot or a cool house all the year round. After flowering and finishing its growth it delights in a good rest without a doubt, and then, to give it a start in spring, an appreciable rise in temperature. Say, for instance, the plants during winter were kept in a compartment with the Mexican species of the same genus. As soon as the basal eyes showed signs of swelling, let them be at once removed to where the Brazilian *Cattleyas* and *Laelias* are grown. They will grow rapidly and flower freely, and may be returned to the cooler structure immediately the blossoms are past. Ample light all the year round is of the utmost importance. *L. pumila*, considering its dwarf habit, takes a good deal of water when well established and growing freely, but during the dull, wintry days the less the better if the pseudo-bulbs have been thoroughly ripened by exposure to sun and air. But on no account should shrivelling of the stems or leaves be allowed, as this weakens the plants considerably. I should always advise growers, when commencing the culture of this species, to obtain newly-imported plants if possible, selecting those that have not unduly suffered in transit, but that have green, fresh foliage upon them. The initial vigour of these is very remarkable and is kept up over a long series of years, and thus they are in most cases superior to even the healthiest of established plants. *L. pumila* seldom produces more than one flower on a spike, this in a good form being about 4 inches across, the sepals and petals rosy purple, the lip having a fine maroon or crimson-purple blotch in front and a yellow

throat. It is a native of Brazil, near Santa Caterina, where it grows at considerable altitude, and it first flowered in this country in 1838.

H. R.

Anguloa eburnea.—This is a delightful Orchid and it is not often seen so late in the season as this. I saw a plant in flower last week that was imported last year and flowering for the first time. One blossom only was produced, but this was a magnificent specimen 5 inches across and of the purest white, save for a few reddish bars in the lip which seem to enhance the purity of the sepals and petals. A cool intermediate temperature with ample moisture suits this beautiful New Grenadan kind.—H. R.

Dendrobium Dalhousianum.—This is a very fine *Dendrobium* when well grown, and produces a large number of flowers. Just recently I saw a large old specimen that was flowering for the second time this season, and though, of course, somewhat out of its time in blooming, the growth was going on all right. This is the point where many go wrong with it; they will not allow the plant to finish its growth before attempting to dry it off, as in the case of the smaller deciduous kinds.—H. R.

Pleurothallis Roezli.—Though not a showy plant as Orchids go, *P. Roezli* is an interesting and handsome species, its dusky spikes of deep red-purple flowers, which only open in part, being as showy as most in the genus. It was first discovered by the collector whose name it bears, but it is said that all the living plants he collected "perished miserably." This was about 1874, but it was quite unknown to British growers until 1885. It thrives best in a cool house, such as suits the *Masdevallias*, and should be always moist. Only a very thin surfacing of compost over good drainage is necessary.

Cypripedium grande.—This is an unmistakably fine *Cypripedium*, a hybrid raised from *C. caudatum* and *C. longifolium*, the good points of each of which it possesses. It is of the same vigorous habit and flowers as freely as the latter kind, and its blossoms are equally as beautiful as those of *C. caudatum*—a useful combination, especially when it is considered that the flowers occur over a long season and that too when Orchids are scarce. Its culture does not differ materially from that of *C. caudatum* and it is less likely to decay at the base of the leaves than it. *C. grande* was raised by Messrs. Veitch and Sons and first flowered in 1883.

Peristeria elata.—The likeness to a white dove is so striking in this pretty Orchid, that anyone seeing it for the first time is sure to be interested and attracted thereby. The beaked column aptly represents the head, and the side lobes of the lip the wings. It used to be more popular than now, and was often exhibited at shows in August and September, but now one seldom sees it shown. *P. elata* delights in ample root moisture and a somewhat substantial compost, equal parts of peat, loam fibre, and Sphagnum Moss suiting it well. During winter the roots may be kept drier, and the best time to repot is when the young growth is about 3 inches or 4 inches in height.

Oncidium luridum.—This is not a popular species, yet it is difficult to say why, for it is of easy culture and the long, graceful spikes of bloom last a very long time, the individual flowers being very pretty. In grouping with other Orchids, *O. luridum* should not be tied up, but the spikes allowed to hang as gracefully as possible, suspending the centre of each with a fine piece of raffia if necessary. The plant has no pseudo-bulbs, but the thick fleshy leaves doubtless serve the same purpose to some extent, and though not requiring a long season of absolute drought, the roots may with advantage be kept well on the dry side from the time the flowers are past until signs of growth reappear. For compost, a lasting make-up is best, so that it will not be necessary to disturb the roots often. Clean Sphagnum Moss, with a third of peat and

medium-sized pots will suit it. Grow it in the intermediate house, and if possible let the atmosphere be a little dry towards mid-day in late summer and autumn, this consolidating the tissues of the plant and rendering it more free-flowering. There is, perhaps, no more variable species of *Oncidium* than this, some of the forms being almost as deeply coloured as a good *O. Lanceanum*.

ODONTOGLOSSUM LONDESBOROUGHIANUM.

This is by many considered a difficult plant to cultivate, and rightly, for it is seldom seen in really good condition after the first few years in this country. When newly imported it comes away well enough and throws immense flower-spikes from bulbs that increase in size annually for a few years. But there usually comes a time when this comes to a stop, and instead of increasing in size they get smaller annually. The first signs of anything wrong, it may be, will be the ends of the roots from a new bulb refusing to enter the compost, or possibly a growth will go blind and the plant remain at a standstill for a season, only partially recovering itself by back-breaks the next season. Insects may attack it and make matters worse, and the plant soon passes out of a profitable state. The usual impression is that *O. LondeSBoroughianum* is quite a cool-house plant, but although I have seen it doing well there, I am sure that a temperature similar to that of the Cattleya house is much the best—at least for the first few years. After this it may perhaps be longer-lived than other *Odontoglossums*, but I doubt it, as the plant has a lot to do in the season to finish up the large pseudo-bulbs, push up its spikes, and often flower in the middle of winter, when the cool house is not a comfortable place for it.

I recently saw some of the best-grown and strongest plants of it that have ever come under my notice, and I was pleased to see that these were growing as I have often advised, not in a cool, shady house, but high up and close to the roof, where Cattleyas and evergreen *Dendrobiums* were their nearest neighbours. The plants were growing in long trellised blocks or rafts with only a small quantity of compost about them, and this naturally suited the rambling habit of the plant. The roots in many places were twisted quite round the rods, and the whole affair was taken down regularly while growing and dipped in a tank, besides being damped occasionally with tepid water. The immense spikes now pushing are ample evidence of the liking that the plant has for this treatment. The flowers of *O. LondeSBoroughianum* are really more like those of an *Oncidium* than an *Odontoglossum*, and are very prettily marked with brown on a yellow ground. They occur on erect spikes, those on strong plants being a yard in height. It is a native of Mexico, and first flowered with Lord LondeSBorough in 1876.

H. R.

***Dendrobium superbiens*.**—Good forms of this species are not uncommon, but in addition to these there are many of a washed-out-looking tint that is far from attractive. The flowers occur on loose terminal racemes and are individually about 2 inches across, a pretty rose-purple in colour, which is much intensified on the lip. As in some other *Dendrobies*, the colour of the flowers on newly-imported plants is often much superior to what shows in later years, and it is rather disappointing to have a fine deeply-coloured form the first year and then to have it dwindle away into mediocrity or worse. Though fairly strong in growth, it is a mistake to treat *D. superbiens* to too much compost, and baskets of small size may be used for it, suspending these at a short distance from the glass.

***Galeandra Baueri*.**—It is late for *Galeandras*, but I noticed a small plant of this in a neighbouring collection during the week. It is a rather low-growing kind with pseudo-bulbs about 1 foot high, from the top of which the flower-spikes

issue. The flowers are pretty, the sepals and petals greenish brown, the outside of the lip white, the front expanded portion purple. Its culture is not difficult if the house wherein it is grown is kept moist, but in a dry house it is sure to be immediately overrun with red spider or thrips. Keep these insects down and a brisk, moist temperature, and there will be little difficulty in growing it well. Drain the pots well, and use a little fibrous loam in the compost. Keep the roots thoroughly moistened while growth is going on, and afterwards, when they have done flowering, remove the plants to a cooler and drier house.

***Calanthe veratrifolia*.**—This is more often seen in old collections of stove and greenhouse plants than in Orchid collections proper, but years ago at the summer exhibitions no one ever thought of showing a dozen Orchids without including it. And though for size of flower there are many to beat it, yet it is pretty and very free-flowering, added to which it is among the most easily grown kinds in existence. It likes plenty of loam in the compost, and I have noticed some fine growths of it recently where loam, dried cow manure, and coarse silver sand formed the whole of the compost. But for my own part I should prefer loam, peat, and chopped Moss, without the sand, as the growths would be more likely to continue good in this. Ample root moisture is necessary in either case when the roots and growth are active, slackening the supply considerably in winter. The large green leaves are very apt to be attacked by scale, and this must be kept under if good results are wished for. *C. veratrifolia* produces long, vigorous flower-spikes often over a yard in length, the upper part of these covered with small flowers of the purest white. It is a native of various parts of India and Australia.

KITCHEN GARDEN.

GIANT ONIONS.

BEING rather sceptical as to the distinctions found between four of the largest Onion varieties, three of which have been recently put into commerce, I obtained seed of the respective stocks from the recognised sources, and had plants raised during the winter and planted out in a good garden in Surrey. I saw these plants in the summer, when it was too early to note differences, if any existed, but have not yet been able to see the resultant bulbs, and therefore withhold criticisms respecting them for the present. But just recently I have seen some of the varieties growing in two Hampshire gardens under the highest possible form of culture, and therefore feel at liberty to say how these new ones have presented themselves under what may be regarded as the most favourable conditions. It is one of the curiosities of Onion culture in relation to their product for exhibition that four of the most able growers, and certainly of the earliest to produce them, reside in North Hants. These are respectively Mr. Bowerman, of Hackwood Park; Mr. Kneller, of Malshanger; Mr. Pope, of Highclere Castle; and Mr. Lye, of Sydmonton. Other great growers are Mr. Wilkins, of Henstridge, Dorset; Mr. Beckett, of Aldenham House, Herts; and Mr. Fyfe, Lockinge Gardens, Berks, all of whom produce wonderful bulbs. My opportunity to note the newer as well as the older stocks was found a few days since at Highclere and Hackwood, both of which fine gardens I visited expressly to see how the Onion stocks had thriven. Certainly in all cases the bulbs are wonderfully fine this year, the deeply-worked and well-enriched soils furnished enabling the roots to go very deep, and thus obtain ample moisture and food, whilst the surface warmth has helped to develop very solid and fully ripened bulbs. Probably cleaner or firmer bulbs have rarely been seen than the present season furnishes, bull-necked ones being very rare. Everybody now knows how to grow these giant Onions, but it does seem as if the soil cannot be

too deeply worked, for the particular portions of ground set apart for their culture are annually worked to a depth of 3 feet; neither can it well be made too rich. Whatever may be one's estimate of the value of these giant bulbs, some liking them—and they have many uses—and some decrying them, at least it is now conclusively proved that until the higher order of culture was introduced we had no conception of the capacities of Onions to produce fine bulbs. But now that we see them weighing from 3 lbs. to 4 lbs., handsome as bulbs can be, or as solid and substantial as they can be, also when well ripened capital keepers—for bulbs of giant dimensions have been easily kept nine months after being ripe—we can but admit that in no other vegetable has there been made during the past twenty years such cultural strides as there has been with Onions.

Probably the largest of all the varieties now in commerce is *Ne Plus Ultra*. This as I saw it in both the gardens named is a reddish form, and most likely a selection from the famous *Ailsa Craig*. Its redness gives it distinctness, whilst selectors of the true *Ailsa Craig* have rather rejected that coloration. I fear it would be a coarse and worthless Onion in a wet season, as it ripens later than all others and seems rather softer. Indeed, I think it possesses some *Red Tripoli* blood, which is far from being a good thing to get into our Onions. A badly selected stock of *Ailsa Craig* will show this red and somewhat late form, but the best selected stocks, of which there are none in the kingdom superior to the *Hackwood* one, have nut-brown skins and much more evenness and refinement. It is assumed that *Ailsa Craig* originated in a selection from *Cranston's Excelsior*, the bulbs of which when well grown give probably the handsomest globular form produced. But the general stock of *Ailsa Craig* is larger. When first put into commerce, and for several seasons afterwards, beyond having a broadish globular form, the bulbs always displayed a bulge on one side of the base that was a feature of the variety that has, by constant selection from the handsomest, been practically eliminated now, and the variety closely resembles large bulbs of *Excelsior*. But stocks of *Ailsa Craig*, and indeed almost all varieties, except where seed be saved specially from a few select bulbs every year, exhibit so much diversity, that it is easy to select from them three or four that may be regarded as distinct. There are the *Ne Plus Ultra* reds, the true *Ailsa Craig*, the slightly smaller and paler *Excelsior*, and the flattish round *Lord Keeper*, or any other of the score of so-called varieties of this type. That fact shows how great is the need for very keen inspection by the trade of their seed stocks. That some houses do take superhuman trouble in this matter there can be no doubt, but under that or some other local name *Ailsa Craig* is sold everywhere now with results none too satisfactory. Another new Onion put into commerce with glowing description is *Aristocrat*—certainly a very foolish appellation. This, as I saw it grown under the best possible conditions at Hackwood Park and Highclere Castle, where the bulbs ripened rather early, is but a *Lord Keeper*, Banbury Cross, Exhibition, Maincrop, or indeed any other Onion of the flattish, round form, the bulbs not much exceeding 20 ozs. each, if so heavy. Some satisfactory reason should be given for putting into commerce a variety that so far has shown no distinctness. A stock of the *Wildsmith* Onion, a selection from the *White Spanish* made some years ago by Mr. Wildsmith at Heckfield, was at Highclere, as at Chiswick, far too irregular and mixed. In both the Hampshire gardens *Cranston's Excelsior* was good clean stocks. *Lord Keeper* was very good, *Cocoa-nut* rather irregular, and it is certainly an unreliable variety and not at all wanted. Mr. Pope is trying hard to set a stock of his *Tankard*, the bulbs of which have flattish bases and broad shoulders, but Onion-selecting and setting are almost a life-long labour. We see that in such old stocks as *Danver's Yellow*, *James' Keeping*, *Bedfordshire Champion*, and others grown in

many gardens, all of which give 25 per cent. of variations. However, Onions are now big enough in all conscience, and beyond size we may well ask for beauty, solidity, good keeping, finish, and, not least, consistency in them. A. D.

Potato Veitch's Maincrop.—This Potato was, I believe, first introduced to public notice last spring, as I do not remember having heard of it before. I purchased sufficient seed to plant one good long row on purpose to test its merits, and the produce has been lifted within the past few days. In the first place, when the nature of the season is taken into account the crop is a good one, the tubers being quite large enough for table use. In shape they are inclined to be flat and roundish, and have a rough or netted skin. It is a handsome Potato to look at, and, as is generally the case when a Potato has a rough exterior, the flavour is also extremely satisfactory when cooked. The flesh is whitish-yellow and floury without breaking to pieces, and such being the case, I intend growing the variety again another season. As regards its season for use, it is, as its name denotes, a main-crop sort, but the forthcoming winter will decide whether it may not also turn out to be a good late-keeping kind as well.—S. E. P.

Potato Devonian.—During the past few days I have been having a good many Potatoes lifted, and among them the new variety named Devonian, sent out by the Messrs. Veitch, of Chelsea, last spring. But a limited quantity were planted, or only sufficient to ascertain how the variety would succeed here. The result is very satisfactory both as regards crop and quality, for when a sample was cooked the tubers were found to be both tender and floury, and at the same time they do not break to pieces when dished up. Since the introduction of Syon House Prolific I have not tasted a Potato that has pleased me better, and shall accordingly reserve the whole of the stock I possess for planting next season. At present Devonian may be described as a main crop variety, but it may prove a good late keeping kind, which matter has yet to be put to the test. The tubers are medium in size, kidney shaped, with shallow eyes and the haulm is rather tall-growing. Those who have not yet grown it should make a point of doing so another season, when if the results prove as satisfactory as they are here, Devonian, will, I predict, be largely grown in future.—A. WARD.

Potato Syon House Prolific.—A very heavy crop of tubers of this most excellent Potato has been lifted here during the past week from a border facing due east. The haulm was quite green, and lifting would not have been performed for some few weeks to come had it not been found on examination that they had commenced to make fresh growth. Now, considering how dry the soil has become during the past few weeks and the fact that rain has not fallen here in sufficient quantity to moisten the ground for any distance down for a long time now, this is rather remarkable. It can, therefore, only be attributed to the soil having become so heated that the tubers were forced to make second growth without the aid of moisture beyond that contained in themselves. I think they have been caught just in time, but had they been left in the ground but a few weeks longer great numbers of young tubers would have been produced and the original crop spoilt. This would have been unfortunate, as I have grown a sufficient quantity of this sort to last for some considerable time during the winter months. Some other late varieties have been found to be similarly affected and were at once promptly lifted.—S. E. P.

Tomato Albert Victor.—When looking round the gardens at Longford Hall, near Manchester, quite recently I was agreeably surprised to find a house nearly filled with plants of this variety of Tomato which were in splendid condition. The remainder of the space was taken up with a few plants of Lord Kitchener, which, although good, was not to be compared with the

first-named either for crop, size, or quality. Albert Victor is of dwarf habit and is exceedingly fertile, a large bunch of fruit being produced at nearly every joint. The fruits are from medium to large in size, bright glossy red in colour, and I was told that in all other respects they are equally satisfactory. The plants are growing in narrow raised borders composed principally of loam, which are built near to the front walls of the house, the house itself being a span-roofed one. They were planted about the middle of May and have now nearly filled their allotted space, and at the time of my visit were literally loaded with fruit from base to tip. It is quite the best house of Tomatoes I have seen this season, and, not having either seen or grown the variety before, on quitting the house a note was made of it with the view of testing its merits personally another season.—A. W.

Lettuce Alexandra White Cos.—At p. 196 "A. D." in his notes on hearting Lettuces refers to the above variety, and wonders whether that stock is now in existence. I believe it is. I first grew it some twenty years ago in a Worcestershire garden, my employer telling me when I took charge that it was his favourite Lettuce. I had had no previous experience with it, but was so pleased with it the first season, that for fifteen subsequent years I was never without it. I used to sow it in the Carrot frame in February, the plants succeeding autumn-planted hatches of Brown Cos and Hardy Hammersmith, and at intervals all through the summer, having even in the most tropical seasons grand heads on the ridges between the rows of Celery. It not only stood, as "A. D." says, a long time before running to seed, but, owing to its fine constitution, grew in seasons when other sorts failed. It has a splendid self-protected heart, crisp and of superb flavour. Two years ago I grew the true strain, having obtained the seed from Messrs. Veitch. Many judges are in the habit of cutting the Lettuces which come under their scrutiny at exhibitions, and this in reality is the only way of arriving exactly at their merits, few things being more deceptive. I can only say that those who exhibit Lettuces, whether gardeners or cottagers, should give Alexandra a trial.—B. S. N.

Potato Renown.—In answer to "A. D.'s" inquiry at p. 196, I beg to say that Potato Renown, to which I recently referred, was sent out by Messrs. Webb and Sons a few years ago. I had it under field culture, and thought very highly of it, not only on account of its fine round shape and general appearance, but its cooking qualities also. The soil it grew in was rather light, and in it Schoolmaster, which I consider a very fine Potato, did not seem quite at home in dry seasons. This induced me to try Renown, and I had no cause for regret. It grew and cropped well, had very few small, useless tubers, kept firm and sound till late in spring, and when cooked with care was very mealy and nutty in flavour. So many of the so-called round varieties are pebble-shaped; whereas Renown as grown by me was almost as round as a cricket ball. If grown clean in the skin it would make a grand exhibition Potato. "A. D." refers to that "at one period" generally grown Potato Woodstock Kidney. I grew it many years ago, and found well-grown samples very hard to beat on the show table and of good quality; but, if I remember rightly, it was not a very abundant yielder and rather prone to disease. Mine was a lightish soil; in deeper, moister mediums it might be more prolific. There can be no doubt that where quality is the chief consideration it would answer in the case of those possessing sufficient ground to grow many of the old and perhaps somewhat capricious varieties—the Fortyfold, for instance, though I daresay it would be difficult to obtain it true. The liability to disease was, I believe, the chief reason why gardeners turned their backs on it, but I have never eaten a better Potato than Fortyfold.—NORWICH.

Some things better omitted.—I should very much like in relation to summer exhibitions of garden produce, especially those so

plentiful in the country that they may be counted by hundreds, which are devoted to cottagers' and allotment holders' produce, the omission from schedules of classes for Rhubarb, tap-rooted Beets, long Carrots, and Parsnips—at least up to the end of August. Whilst waste does not of necessity occur in connection with Rhubarb, because the best stems can be easily seen, it is not so in the case of the roots named, and distressing waste often results in seeking for the best few roots to the injury of many not good enough. But Rhubarb is so much out of season in July and August, when true fruits are usually abundant, that few, if anyone, then think of using it. After the autumn rains come and new growth takes place, then nice young stems are available for cooking. I notice, however, that the old craze for huge stems is dying out, judges preferring to select those which most nearly approach to fitness for domestic uses. Long Beet is never ready for use until September, and any good stock of the Globe is for July and August far superior. The bulbs of these are easily seen, and not one need be pulled wastefully. There are no better or more desirable summer Carrots than are the Short Horn, Nantes, Champion, or Favourite types, as these are then fully grown and of the highest quality. Long Carrots are at their best in the autumn, and to pull them in the summer is sheer waste. As to Parsnips, inviting roots of these in the summer is folly. It is difficult to impress these things, however, on rural show committees.—A. D.

GARDEN FLORA.

PLATE 1241.

RHODODENDRON LITTLE BEAUTY.

(WITH A COLOURED PLATE.*)

By the crossing and intercrossing of seven different species of Rhododendron, all natives of the various islands of the Malayan Archipelago, we have now a splendid group of charming garden varieties which are particularly valuable, not only from the beauty of their blossoms, but also from the fact that they flower more or less continuously throughout the year. Of the seven species, the one that has played a part in the production of the least number of varieties is *R. malayanum*, which, however, in conjunction with the variety Monarch, has given us that charming form herein figured—Little Beauty. *R. malayanum* is a small, compact-growing shrub that was introduced by Messrs. Veitch from the island of Sumatra. The pointed leaves are each about a couple of inches long, while the tube of the flower is little more than half an inch in length and about the same across the expanded mouth. The colour is a kind of crimson-cerise. The seed-bearing parent was the variety Monarch, with orange-yellow blossoms. This resulted from crossing the blush Princess Alexandra with the orange-crimson Duchess of Edinburgh. The variety Little Beauty has, apart from the interest attached to its pedigree, much to recommend it, as, unlike some of the older hybrids, it is of a particularly dwarf, bushy habit of growth. The flowers, which are produced in clusters of six to nine, are of a uniform glowing carmine-scarlet tint, the tube being somewhat less than an inch long, the segments of the limb spreading, with a diameter equal to the length of the tube. It received an award of merit from the floral committee of the Royal Horticultural Society, December 15, 1896, thus showing its value for winter blooming. It was, however, raised and flowered some years pre-

* Drawn for THE GARDEN by H. G. Moon in Messrs. J. Veitch and Sons' nursery at Chelsea. Lithographed and printed by J. L. Goffart.



vious to that date, as Professor G. Henslow, in his paper on "Hybrid Rhododendrons," read at a meeting of the society on May 12, 1891, refers to and describes it. Besides its value as a flowering plant, the variety Little Beauty will doubtless be made use of by the hybridist, possessing as it does the desirable features of compact habit and brilliantly-coloured blossoms freely produced. Its cultural requirements do not differ from those of the other members of this group which have been so frequently dealt with in the pages of THE GARDEN.

H. P.

THE WEEK'S WORK.

KITCHEN GARDEN.

LATE SUMMER VEGETABLES.—Where regular attention in regard to mulching, watering, and feeding has been given, late supplies of such vegetables as Marrows, French Beans, and June or July-sown Peas will now be invaluable. At any moment, however, a sudden and complete change in the weather may be looked for in some places; indeed, frost has already been recorded on several nights. Such being the case, those who would preserve Beans and Marrows in a bearing condition must be up and doing. Little frost is needed to completely paralyse the latter, yet it is surprising how much frost a thin covering of canvas will resist. Do not cover up until late in the evening, as the dews tend to recoup the foliage after hot, sunny days. Walker's Perpetual Bearer Pea deserves more general cultivation, as it is not only a good quality Pea, but resists mildew better than most varieties. In large establishments where the demand for French Beans is constant, a sowing, or even a pot-raised batch, transplanted into a cold frame or pit at the end of July will now be coming into yield, and will be sufficiently protected at night by simply drawing on the lights, covering with double garden mats by the middle of October. Care must be taken not to over-water these extra late batches, as rotting at the base of the stem, owing to a fall in the night temperature, will probably occur. Avoid administering frequent dribbles, rather allowing the soil to get fairly dry, and then give a thorough soaking with diluted farmyard liquid, choosing a fine sunny day and doing the work in the forenoon. The value of these Beans consists to a great extent in their filling up a blank which always occurs between the destruction of the latest open-air lots by frost and the supply from the first pot-grown plants indoors. The early part of November affording a none too varied assortment of choice vegetables, those who sowed a row or two of Scarlet Runners at the end of June, and, instead of treating them in the orthodox fashion as regards supports, allowed the haulm to grow to a height of 3 feet and then pinched out the leads as advised, will not only have found that so grown better all-round autumnal pickings have been obtained, parching sun and drying winds doing less damage both to root and top, but that with a minimum amount of labour protection may be given to at least one row by a simple home-made framework and canvas or mats.

FORWARDING SEAKALE.—After such a tropical season the probability is that extra early-planted beds of Seakale intended for forcing in November will, where occupying sloping south or west borders, be sufficiently advanced towards maturity as to need no aid to the same. On clay soils, however, where the ground is level and more rain has fallen, crown ripening may be hastened by thrusting a spade in on one side and severing the lowermost tap roots. Extra vigorous beds may also have a portion of the leaves reduced with a knife.

WINTER SPINACH.—Although in most places rain has recently fallen, winter Spinach sown early and in shallow soils will, I fear, have a somewhat hard time of it, and must be carefully looked after as soon as the young plants appear.

Especially is this so where the seed was sown on sites previously occupied by crops which sapped every particle of moisture out of the ground. I have practised mulching between the rows with old Mushroom manure or any similar material, this proving of great service by preserving the moisture communicated by artificial watering. This treatment will often keep the crop just merely on the move till copious autumn rains fall. I have before recommended sowing several lots in different positions, thus having several strings to the bow, as winter Spinach is in many places of such importance. Be diligent in the frequent use of soot and wood ashes, stirring them in with a Dutch hoe previous to watering. This will also aid in keeping the dreaded wireworm at bay. Nitrate of soda is also beneficial when used with discretion, as it promotes a certain amount of moisture in the soil.

PREPARING PEA PITS.—It is not wise to postpone the preparation of pits and deep frames intended for the reception of early Peas in November and December, as one is never sure what the weather may be like later on, and if the compost is got in in a semi-dry condition, a great point is gained and the seed does not rot. I have always grown Chelsea Gem and other dwarf early sorts in cold pits, and like to get them in readiness by the middle of October. I take out trenches annually and replace with new soil, first of all treading in the bottom a liberal quantity of well-decayed manure. The soil in which Pines and Tomatoes in pots have been grown is suitable, as it contains much rich food, the result of artificial feeding throughout the summer. If a little quite new loam can be added, and the compost after being duly mixed thrown in in a semi-dry condition, no rotting need be apprehended, and the Peas after sowing can be exposed to a good rain or two to ensure perfect germination. I prefer this system to merely digging the frames over and working in manure or even to going to the labour of entirely replenishing all the soil.

J. C.

OUTDOOR FRUITS.

WALL TREES.—Walls which have been covered for many years with big trees are often found to be in a very neglected state as regards pointing up, and the crevices formed by the falling away of the mortar form convenient hiding places for most insect pests that infest the trees themselves during the summer months. Pointing up such walls every few years pays for itself by the extra cleanliness gained, and the present is an excellent time to do the work, as the mortar used has time to set thoroughly before sharp frosts, which would disintegrate it and cause it to drop away, set in. To allow room for working, the branches have to be brought away from the wall and supported in some way, the best method being to fix upright stakes, to which the branches may be tied in loose bunches, or singly if time can be spared. In any case the trees should be fixed firmly enough to resist the force of high winds, which may be expected during the late autumn. Before pointing is begun some of the old mortar should be picked out from the joints in the brickwork, so that there will be room to allow for a fair quantity of new material, as it is only in this way that the facing material can be induced to stand well. The new mortar should be carefully mixed, with just enough cement in it to harden it fairly without making it too hard to allow of driving nails when required; this is a matter frequently overlooked, and nailing becomes a misery when both bricks and joints are over-hard. The removal of trees from the walls gives an excellent opportunity for thoroughly syringing Cherries, and other trees much troubled with insects, from behind; this will remove filth and insects, not easily reached when the trees are fastened back. One or other of the various insecticides should be used, and, as the leaves are now well hardened, may be used at full strength. Before the branches are again fastened back the older and more rugged portions of them should also have a good dressing of Gishurst or of what-

ever else may be used as a winter dressing, the opportunity of doing this being too good to be lost. Trees of all kinds on walls that do not require the drastic treatment recommended above for those in bad condition should have a final look over, with a view to releasing any ties or shreds that may be crippling or causing undue pressure on the shoots, as if such shoots are released now the bark will not have been much injured, and will harden nicely before frost comes, and this hardening will prevent the gumming that so often leads to badly-wounded branches.

ROOT-PRUNING.—There can be no doubt but that root-pruning is a very great help to fertility in the case of trees whose roots have got out of bounds and, possibly, into the crude and ungenial subsoil. The well-doing of trees is not regulated by the immense spread of root which some of them have, but by the number of feeding roots which can be produced in a given space where food is plentiful, and root-pruning is one of the greatest possible aids in the production of such roots. Some people are very particular to carefully lift and relay every root that can possibly be saved, but it has been proved over and over again that, provided root-pruning be done properly—i.e., each root severed with a clean cut at a point close to the junction of a lesser root, and not too close home to the bole of the tree—the loss of a portion of each root is immaterial, and the work is greatly facilitated by getting rid of the trouble of relaying the uncovered portions. In this matter I make a great distinction between the trees to be simply root-pruned and those to be replanted. In the latter case I carefully try and preserve every possible bit of root, as I know that all will be required to assist in re-establishing the tree, but the case is very different where no lifting is intended, as the roots are then ready to produce feeders, and plenty of them, immediately. When root-pruning, a good broad trench should be taken out round the tree at a distance from the bole corresponding with the spread of the branches, or nearly so, and if there is a suspicion of gross growth and unfruitfulness proceeding from one or more tap-roots, the ball should be undermined and such roots severed, for if they are allowed to remain the severance of any spreading roots will be of little avail in inducing a more fruitful tendency. When refilling the trench, be careful to incorporate with the soil a plentiful supply of mortar rubbish and burnt earth or wood ashes. If some good turfy loam can be added, so much the better, but whatever may be used should be well trodden or rammed home, as firmness in fruit borders is a very desirable condition. If on examination the subsoil is found to be wet or sour, the excavation made should go to a depth of from 30 inches to 36 inches and the bottom be filled up with brick rubble several inches in depth before replacing the soil.

RASPBERRIES.—The autumn-bearing Raspberries will now be in full bearing, and may be assisted to swell up quickly by giving good soakings of liquid manure as opportunity offers. With me the advantages of cutting down all the canes of these varieties in spring has been well exemplified this year, for those so treated have come into bearing much earlier than those which have been allowed to carry a double crop, and the weight of fruit is also very much greater. I have before alluded to this and am convinced that those who give the plan a trial another year will not go back again to the old system, as one can always, or nearly always, depend on a good crop from the summer-bearing varieties, but the others are not so sure unless given this special treatment of treating the canes as annuals only. The canes of the summer-bearers which have borne fruit should now be cut away entirely, as those for next year will be getting nicely hardened and will derive no further benefit from the protection and sustenance given by the older canes. All the weak canes made this year should also be cut away, saving only the strongest and best of those farthest removed from the old stools with which to make new plantations. A fortnight back I wrote of the preparation of land for prospective

fruit planting, but made no especial allusion to the Raspberry, so I may now add that ground for Raspberries should be well manured and trenched deeply; the length of time over which a bed so made will last in good bearing being ample repayment for the extra work of preparation. If this is done now, the plot will have nicely settled for planting a month hence.

STRAWBERRIES.—Since the rains with which we have been favoured, Strawberry plants have made good growth and runners have again been freely produced. The beds and pots should now have a final look over, removing all runners and hand-weeding among the crowns of the plants, after which a dry day should be chosen for running the hoe through all plots; this will kill a lot of seed-weeds if the rake follows the hoe and is plied freely among the plants. CORNELIAN.

THE MARKET GARDEN.

FRUIT-FARMING IN SCOTLAND.

The great centres of fruit cultivation in Scotland are the Clyde valley, Perthshire, and, to an increasing extent, the neighbourhood of Aberdeen. The farm with the working of which this article is chiefly concerned is situated in Perthshire, and the observations as to the cultivation, picking, and despatch of the fruit apply more especially to that district, though the system is much the same in the other districts. Moreover, since the cultivation of Gooseberries and Currants has not hitherto thriven there—growers being discouraged partly by the length of time elapsing before the bushes become productive, and partly by a blight which has attacked them—these fruits may be dismissed with the remark that the enterprising grower who can afford to wait a while for his harvest will, if he can successfully combat the blight, reap a rich harvest, since the limited supply of both fruits, and of Currants in particular, ensures good prices being obtained.

To grow Strawberries and Raspberries profitably on anything like a large scale there are three things essential. The farm must be situated within a sufficiently short distance of a station, to admit of the fruit being easily transported to the markets; it must be near enough to a town to ensure a constant supply of labour on a large scale; and, finally, it is obvious that the land must be well adapted for the culture. It is a somewhat curious fact that our ideas as to suitable soil differ materially from those of our southern friends. Here it is thought that the best ground for growing Strawberries is a light gravelly soil—for choice, reclaimed moor or woodland—which to the Kent or Hampshire farmer would appear most unlikely to produce good crops.

RECLAIMING LAND.

The process of reclaiming moorland is, as may be supposed, a costly one. The first operation consists in what is known as trenching, that is, turning over the ground with spades to a depth of 2 feet or 3 feet, according to the character of the soil, great care being taken to avoid breaking through the crust into the subsoil proper. Trenching is usually done by piecework, at the rate of not less than 1s. per pole; and the cost per acre is therefore at least £8. The result of the trenching is to leave a most unpromising-looking surface, which to the eyes of the casual observer resembles nothing so much as a shingly beach. The next step is to try and equalise to a certain extent the balance of power between earth and stones by gathering up a few tons per acre of the latter.

Having spent as much money as he chooses on this business—and, in our opinion, the less the better, since, do what he will, at least half the soil consists of stones—the farmer proceeds to get rid of some of the superfluous weeds by planting a crop of Potatoes—one of the best patent weed-killers known. The ground is then ready for planting with

STRAWBERRIES.

which should, if possible, be done in autumn, but is often deferred till spring—the middle of March or April, according to the season. The ground must first be thoroughly manured—no small item in the farmer's expenditure, the proper amount of manure being from 30 tons to 35 tons per acre, at an estimated price of 6s. per ton. There is a very considerable degree of skill required in the apparently simple operation of planting; and, as the whole future of the plant depends upon it, the utmost care must be taken. It used to be the custom in this district to use a dibble. With this the planter made a hole in the ground, and he then proceeded to insert therein the roots of the plant wrapped closely together. This was a barbarous method of planting a Strawberry, with its spreading fibrous roots, and has been generally abandoned in favour of the orthodox method of using a trowel. It is usual to leave a space of about 10 inches between each plant, and of not less than 30 inches between the rows, and even with this interval it is heartrending to see how many berries the pickers crush into a pulp.

It might be thought that, having once planted his fruit, the farmer had only to sit down and enjoy the profits. The reality is very different. There is hardly a month in the year in which he must not be working among it. The ill weeds, which proverbially grow apace, seem to increase with lightning rapidity in a Strawberry field. In the autumn and spring large gangs of workers are employed for weeks in weeding. The weeds are collected in baskets and burnt, and you flatter yourself that never another will dare to show its head in the field. It is a fond delusion; at the first shower there spring up as if by magic Chickweed, Bindweed, Thistles, Docks, and all other abominations. And so the weeding process is repeated again and again, and unless it is constantly and efficiently carried out, good-bye to the hope of having a remunerative crop. In addition to the labour just mentioned—since this form of cultivation affords a good example of the survival of the fittest, and many plants fail to survive the inclemencies of the season—the vacancies in the rows have to be filled up, which is usually done by training the runners of the survivors over the vacant spaces.

The chief enemy which growers have to face, apart from weeds, is frost. Hardly a year passes in which the crop of the early varieties is not decimated by late frosts, and it is occasionally almost totally destroyed. In the evening a field is white with strong healthy blossoms, as if it were sprinkled with snow, and next morning a careful examination reveals that most of the blossoms have brown and shrivelled centres, which will never develop into fruit.

The varieties of Strawberries which are principally grown in this district are two: the Rifleman, a small early berry, deliciously sweet, which is said to make the best jam, and the Elton Pine. The latter is a late variety, producing much larger fruit with a slightly acid flavour. The size sometimes attained by these berries is remarkable, and it is said that six or seven selected at random have been known to weigh a pound. Other varieties, such as Garibaldi and Royal Sovereign, are also being cultivated, and it would appear from the

marked falling off in crops of late years that some new variety is badly wanted. It is an unfortunate fact, which is certainly true as regards the reclaimed moorland, that when once there has been a crop of Strawberries taken from the ground it will never bear to much advantage again. Apparently they absorb some substance out of the ground which cannot by any known process be replaced. Experiments have been tried by taking a five years' rotation of other crops off the ground and then replanting it in Strawberries, but the result has never been satisfactory. Of course, the small grower must be contented with the inferior results produced by repeated planting; or when his plot of ground has been exhausted for Strawberry cultivation, he may plant it in Raspberries. The yield per acre from the virgin soil used formerly to be most astonishing. From 2 tons to 3 tons per acre were no uncommon crop; and in those days of big prices the profit was very large in spite of the fact that the productive life of the plants is so short. But now-a-days, for some unknown reason, which cannot be wholly ascribed to the inclement seasons of the last two or three years, the yield per acre has diminished to a remarkable extent, and is very often less than a ton. It must not be assumed that all or even the greater part of the fruit grown in this district is grown on the virgin soil redeemed in the manner described above. A great deal is grown on agricultural ground which has been reclaimed at some remote period, but certainly the best results have been obtained from the new land. Whether it is worth while to go to the expense of reclaiming ground which, after bearing its one crop of fruit, is practically useless for other agricultural purposes is a question open to doubt, more especially as it is almost impossible wholly to eradicate Broom and Whins, and if left to itself the ground will in an incredibly short time lapse from civilisation into savagery.

RASPBERRIES.

Turning to the Raspberries, the lot of the grower would at first sight appear to be a far more happy one. Raspberries possess this great advantage over Strawberries, that the bushes are more or less permanent. How long they will go on bearing if properly cared for is hardly known. In gardens bushes of thirty or forty years old may be seen producing as good crops as five-year-olds, and the cultivation in fields is still too young to estimate what is their limit of profitable production. The expenses of growing them are, however, greater, and go far to reduce the margin of profit, and, moreover, they take longer to become productive. While good results are obtained in the light gravelly soil so well suited for Strawberries, Raspberries thrive better on a richer alluvial soil. It is usual to plant them after cleaning the ground with a crop of Potatoes, as in the case of Strawberries, the young plants or suckers being cut away from the old bushes in autumn. They should be planted at intervals of 3 feet in rows about 5 feet apart. This space is necessary not only to enable the pickers to move freely about without treading down and breaking the young canes, but also to admit of the passage of a horse for cleaning. When only grown in small quantities it is perhaps best to train the bushes on stakes, as in a garden; but the expense and trouble of doing this on a large scale are so great, that the large farmer usually trains them on two galvanised wires, the top one being at the height of 4 feet to 5 feet from the ground. As in the case of Strawberries, the farmer's labours have only begun when he has planted his Raspberries.

The weeding has to be carried out with the same unflinching perseverance. After the fruit has been picked, the old canes and some of the young ones are cut away, and such of the latter as are to form the bushes for next year are tied to the wires, the number left in each bush varying, according to the fancy of the grower and the strength of the plant, from five to ten. This operation, as may be easily supposed, requires judgment and skill. An error in not selecting the best canes or clumsiness in tying may ruin the whole crop. The smaller canes are simply trained upright against the wires, care being taken not to tie them so loosely as to admit of their "wagging" too much (in which case a gale of wind may do great damage by snapping them off when heavily laden with fruit), or so tightly as to interfere with the free passage of the sap. As regards the treatment of the taller canes, opinions differ. In some years they grow so luxuriantly as to attain a height of 7 feet or 8 feet, and manifestly they cannot be treated in the same fashion as their smaller brethren. Some cut off a foot or two of the canes and train them straight up the wires, and think that thus shorn they bear as well as when left their full size. Others—and theirs is probably the better course to follow—have a system of arching, or "bowing," as it is technically called; but this again is a process requiring great skill. You must humour the cane, commencing to curve it gradually from the root in such a manner that the bush resembles the shape of a fan. Too often the unfortunate canes are trained straight up for 3 feet or 4 feet, and then roughly bent and twisted horizontally along the wires, so that the stem ultimately becomes gnarled and distorted.

INSECT AND OTHER PESTS.

Every three or four years the Raspberries must be treated to a plentiful dose of manure, and an allowance of 40 tons per acre is not too much to give them. But even with the best treatment they too often disappoint expectations. It is true that, thanks to their long tap-roots, they do not feel the effects of summer droughts so much as Strawberries. Nor does the frost affect them to any appreciable extent. A far greater danger is that the young canes will flower and even fruit in autumn. The canes which do so are usually the strongest and comeliest; and if the farmer is careless enough to select them as his mainstay for next season he will have but a miserable crop. There may often be seen in a row of bushes thick with foliage and hanging with fruit a number of withered, dried-up sticks. These are the canes which have wasted their strength and energy to no good purpose in flowering the previous year.

But, apart from this danger, there are others and worse to be apprehended, for which there is practically no remedy. There are at least three insect pests which too often destroy the promise of the season. The first of these is the Raspberry moth or borer, which, when in the form of a small caterpillar, pierces the soft, juicy part at the base of the buds, and prevents the shoots from expanding. There can be no doubt that the harm done by this caterpillar is sometimes very great. It may be somewhat alleviated by forking into the ground at the roots of the bushes a mixture of soot and lime in the autumn or early winter, but the only real remedy is the somewhat drastic one proposed by the Board of Agriculture—namely, cutting down and burning the infected canes.

Another enemy which does less real mischief, though his appearance is more alarming, is the Raspberry beetle, which employs itself in eating out the heart of the berries while still in bud

and in flower. But since these beetles only attack the individual flowers and their capacity for food is not inexhaustible, the mischief done by them is less than it would appear to be, though at times they are seen in such myriads that it would seem likely they would destroy the whole crop. Spraying with paraffin appears to discourage but not to destroy very many of them, owing to the fact that they have wings, which they use with considerable agility on the approach of danger. The beetle is in appearance something like a dark and rather dissipated-looking ladybird.

Last, and worst of all, is the much-dreaded Raspberry weevil. It is a clay-coloured animal of about $3\frac{1}{2}$ lines long with dark red legs, and is said to have pitchy, twelve-jointed antennæ furnished with clubs. Its character is as bad as this somewhat formidable description of its appearance would lead one to conjecture. These weevils in the daytime live in the earth at the bottom of the bushes, whence they come out at night in immense numbers to feed. They are not content with nipping off individual berries, but bite half through the stem of a cluster of ten or twelve, so that the damage they will do in a single night must be seen to be believed. No remedial measures are of much avail. They do not come out by day, and if you hunt for them in the earth they either pretend to be dead, when they are practically indistinguishable from the surrounding soil, or burrow quickly out of sight. Some growers send out men at night to hunt them with lanterns and cloths soaked in paraffin. These they hold under the bushes and tap the wires, whereupon the weevils fall down into the cloths.

THE FRUIT MARKET.

It may be seen that the cultivation of both Strawberries and Raspberries is itself no sinecure, and that it is no easy matter to produce a good crop of either fruit. Having got his crop, however, the further question remains, how is the farmer to pick and dispose of it? His difficulties with regard to the latter point are by no means small. The small grower, with his acre or half-acre of ground, can always reckon on finding a market for the comparatively small quantity of fruit which he can supply. He can either sell it for eating, in which case it is usually sent to be sold on commission in the markets of the large towns, or he will have no difficulty in finding a sale for it with the jam-makers. But the large grower, who despatches every season from 80 tons to 100 tons of fruit, has a more difficult task. Accordingly, every year before the fruit is ripe the grower, the boiler and the ubiquitous middleman begin to haggle over terms. There is perhaps no commodity of trade which is subject to such fluctuations in price as is fruit. The last three or four years have afforded an excellent illustration of this. The price of Strawberries in these seasons has varied from £10 to £30 per ton, and that of Raspberries from £15 to the phenomenal rate of £40. At the former prices the cultivation would not pay its expenses, while at the latter the profit would be handsome. How can the grower decide what price he is to hold out for? He cannot wait, with his fruit rotting on the ground. He is perfectly sure that if he stands out for a higher figure prices will go down, and he is equally sure that if he sells at the prevailing rate they will go up; and he has excellent examples from former years illustrating the truth of both his convictions. The mere fact that his own crop is a poor one is no criterion as showing that others are equally poor; and it is the most difficult thing to obtain anything like a reliable report as to the character of the general crop, it being the interest

of growers to depreciate and of boilers to exaggerate its size. Another difficulty is to determine the quantity of fruit which he is safe in selling. He meets this as far as possible by selling a certain amount which experience shows him should be well within his margin, and disposing of the remainder as a balance. But since the amount of his balance is necessarily uncertain, the price obtained for it would be lower than that which he would get for a fixed quantity, and the temptation to sell within a very few tons of his estimated crop is strong. A shower of rain at the critical time may make all the difference between ability and inability to fulfil his contracts, and the sanguine man who trusts to luck may find himself with his contracts unfulfilled and not a berry left to supply the deficiency, while the timid man is gnashing his teeth at finding that he has a large and comparatively unremunerative balance.

FRUIT-PICKING.

As, year by year, the area under fruit cultivation increases, there is an increase in the difficulty of picking the fruit. It is absolutely essential to be within reasonable distance of a town; but even so the supply of pickers is no longer equal to the demand. A farm of seventy or eighty acres in fruit will require a constant supply of from 150 to 250 pickers; and even the latter number, in the height of the season, when the Raspberries and late Strawberries are ripe together, cannot cope with the fruit, tons of which are sometimes lost from inability to pick it. The pickers are divided into gangs of from 30 to 70, and are under charge of an overseer. The work begins at about 6 a.m., and is continued, with an interval of an hour for dinner at midday, till 4 p.m. Wages vary from about 1s. 8d. to 2s. per head, irrespective of the quantity picked. It would appear to be a far more satisfactory arrangement to pay them by the work done, at so much per basket; but in this district no one has yet been able to introduce that system. When the crop is in full swing, each picker should be able to gather something over three-quarters of a hundred-weight of late Strawberries and half a hundred-weight of Raspberries. It may easily be seen that the small grower, who is able both to weed and to pick his crop with the aid of his family and perhaps half-a-dozen hired hands, has not to meet the difficulties of the large farmer, and that his profits are proportionately larger. In picking fruit for eating, the pickers either carry baskets holding from five to seven pounds, in which the fruit is sent direct to the market, or else gather it into those small punnets containing about a pound, the appearance of which in shops is so familiar to the eye. These punnets are then packed in crates or boxes containing four or five dozen. It is only fair to the retail fruiterer to say that the mysterious law, by which the large berries invariably gravitate to the top of the basket, appears to hold good when the fruit is gathered by unsophisticated rustics, to be sent to market, almost as surely as when it has been prepared for retailing to the public.

FRUIT FOR THE JAM FACTORY.

The method of picking to send to the jam-maker is the same with both Raspberries and Strawberries. The pickers carry a large basket slung round the neck, which they partially fill with fruit and empty into pails brought round by men specially detailed for the duty. The fruit is then transferred to juice-tight kegs or barrels, and in them is sent to the jam-maker. These vary in size, but are usually constructed to hold about one hundredweight of fruit. It may come as a shock to the consumers of

bought jam to learn that the fruit out of which it is made is treated in this cavalier fashion; but it is astonishing to see how fresh and sweet a cask of good honest Scotch fruit will be on its arrival after a journey of thirty-six hours—that is, if it has been picked dry. Unfortunately, it is not always dry in Scotland, and a hundred-weight of wet fruit, after being jolted over three or four hundred miles in a goods train, is apt to present a somewhat uninviting appearance. Still, if used before fermentation sets in, it makes very nearly as good jam as the dry fruit. If only Scotch or English fruit were used by the boilers the consumer would have no reason to complain. If he were to see the quality of the foreign fruit with which too many of them doctor up their jams, he would certainly hesitate before eating. To save a few shillings, a boiler will use barrels of foreign fruit, which he picks up at a low price, and which is nothing more nor less than a seething mass of fermentation, no more fit for human food than any rotten fish condemned at Billingsgate. That some strong measure is required to meet this ever-increasing abuse is certain, in the interest not only of the home grower, whose margin of profit grows smaller year by year, but also of the consumer, who has a right to expect that his jam shall not be adulterated with this poisonous stuff. Any attempt at obtaining further legislation on the subject is met by the old parrot-cry of protection; but it is surely not demanding very much to insist that jam made either wholly or partly with foreign fruit should be marked as such. If once the public would realise the nature of the stuff which they are sometimes called upon to eat as “home-grown jam” the evil would not be tolerated for a moment. Even if the provisions of the existing Merchandise Marks Acts were more thoroughly enforced, a great deal might be done to check the evil. Much might be done by railway companies in cheapening their freights, so as to enable home-grown to compete in the market with foreign fruit; and it is only fair to them to say that in the last year or two they have shown some disposition to do this. It must be understood that this indictment is not intended to apply to all jam-makers; but it is an undoubted fact that it does apply to many, and that the quality of the foreign fruit thus used has in no wise been exaggerated in the present description.

LOSSES AND CROSSES.

The quantity of fruit which is despatched all over Scotland, to the north of England, and to Ireland in the manner described above is enormous. Given 300 pickers, picking their proper quantity, one grower will send off his 7 tons or 8 tons a day. With so great a quantity, each barrel having to be separately addressed, mistakes must sometimes occur; and, in dealing with such a perishable commodity as fruit, a misdirected barrel may be a total loss to the grower. The picking season is indeed an anxious time for him, and every day brings its cares. One boiler telegraphs to say that his works are closed for a week owing to holidays, and that he cannot take fruit during that time; another that he can only take fruit despatched by an early train; and a third that he has already more on his hands than he can boil, and that he can take no more at present. They one and all, with surprising unanimity, try to avoid taking fruit gathered on Friday or Saturday, and seem to be entirely oblivious of the fact that it will go on ripening and going to waste on both these days, and even on Sundays also, as much as on any other days in the week. As they have only a short day at their works on Saturday, the boilers expect the fruit to stand

still and await their convenience at the beginning of the week. The grower naturally does not see the reasonableness of this, and hence arise many bickerings, and much profit to the telegraph department of the revenue and occasionally also to the legal profession. At the end of a day spent in struggling to extract a reasonable amount of work from lazy pickers, in despatching numerous telegrams to obstinate boilers, and in wrestling with the intricacies of the traffic systems of railway companies, who refuse to guarantee connections, the unfortunate farmer is inclined to wish himself well out of the business. Fortunately, the season is not of long duration; six or seven weeks see the end of it, and he may then sit down for a short time and count his profits, if he has any to enjoy.

PROFITS.

It cannot be denied that these profits in some individual years are large, and in such they

fruit farmer is not altogether a happy one. The truth of the matter is that this trade, like every other in the country, is being overdone. It is only under very favourable conditions that it can at this date be carried on profitably on a large scale. In short, fruit-farming, while it still affords an opening to a man who will count the cost before he takes it up, is no longer—if it ever was—the farmer's panacea; and the wise man will pause and reflect before following Mr. Gladstone's advice to rush into fruit growing.—*Chambers's Journal*.

FERNS.

ADIANTUMS FOR THE COOL FERNERY.

OF all the Ferns which will succeed well under cool treatment, the Maiden-hairs are the most appreciated. It is sometimes difficult to esta-



Adiantums on a wall.

amplify repay the trouble and expense of cultivation. They are, however, by no means so large or so regular as they would appear to be to the casual observer, who notes that the farmer may get his ton or two of fruit per acre, and calculates that with reasonable prices he should have a gross return of £40 or £50 per acre. The expert who has made an accurate study of the trade—who estimates the expenses of planting, weeding, and picking, and who realises the constant anxieties and heart-burnings which accompany the cultivation, the losses resulting from the inclemencies of the season and the insect pests, and, lastly, the uncertainty whether anything like a fair price will be obtained for the crop—will be disposed to agree with the writer of this article that the lot of a

lish them, but once they get a good start they soon spread. In a cool house where the walls are moist, seedlings will often spring up and cover large spaces without any assistance, but, of course, it is only where the conditions are particularly favourable that a wall can be covered without any assistance. A beautiful effect may be made by covering a shaded wall with Adiantums. Some rough peat and Sphagnum Moss may be fixed by the aid of wire netting, the size of which should be regulated by the plants intended to be used. While larger plants may be used, quite small ones are the most desirable. After the wall has been properly covered and moistened, small seedlings may be pricked in at regular distances. If put in rather thicker than it is intended for them to remain, it will

allow for a few that may die off, or they may be thinned out after they have made a start. Those with the spreading rhizomes are the most suitable for the purpose, one of the best being *A. assinile*. When once this gets established the rhizomes spread freely and soon cover a large space. It is a native of Australia, and can be recommended for the above purpose and also for suspended baskets, the slender drooping fronds being of a soft pale green. Of *A. Capillus-veneris* there are some very distinct varieties, all of which do well in a cool house. The ordinary form, which is found in this country, is one of the best for walls, and where spores abound they will often cover large spaces on damp walls without any assistance. I have seen walls entirely covered, the result of self-sown spores. Of course it is only where a certain amount of atmospheric moisture is regularly maintained that they succeed well. Of the nearly allied varieties *imbricatum* is the most beautiful, having large deeply-cut pinnules, which closely resemble those of *A. Farleyense*, and it is sometimes called the hardy Farleyense. I have never raised spores of this, but it has the peculiar feature of producing small bulbils on the margins of the pinnules, and young plants may be established from these, besides which it may be readily increased by dividing the spreading rhizomes. *A. Mariesi*, also known as *A. Raperi*, is a distinct variety from Japan. The erect fronds are of a rich olive-green and the stout stipes have a peculiar bluish metallic hue. This is more suited for pots or the rockery. *A. O'Brieni*, from South Africa, closely resembles the above, but has smaller pinnules and more spreading fronds. None of the *Capillus-Veneris* varieties have any coloured tints in the young fronds, and all succeed better in a more shaded position than those with the red-tinted fronds. *A. elegans*, by some given as a variety of *colpodes* and others as a variety of *cuneatum*, is certainly harder than *cuneatum* and the best Maiden-hair for a cool house. It comes freely from spores, and grown side by side with *cuneatum* I have invariably found it to keep its fronds better and make better growth under cool treatment than *cuneatum* does. *A. rubellum* is the best of those with tinted fronds for a cool house. Grown well exposed to the light, the young fronds have a rich almost crimson tint which is retained longer than in most of the tinted *Adiantums*. A. HEMSLEY.

Fern spores.—"Another important matter," writes Mr. Hemsley at p. 186, "is in collecting spores to take them from plants that have been isolated from others which produce spores freely." That passage seems to need some explanation, as it is very well known that no cross-fertilisation, or indeed any common form of fertilisation, takes place during the formation of spores on Ferns. Practically these spores have no organs that admit of cross-fertilisation, neither are they produced by flowers, as is the case with all ordinary plants. That being so, I do not quite understand what may be Mr. Hemsley's reasons for giving the above advice, unless it is that he thinks varieties of Ferns that are free spore-producers may, if in contact with other varieties, cause those spores when the cases burst to become attached to other Fern fronds, thus when spores are sown furnishing them in a mixed state instead of quite separate and true. It is very odd, but yet instructive, to learn from botanists that the real fertilisation of Ferns takes place after the production of the prothallium, the first product of the germinated spore. These prothalliums are bisexual and produce, as it were, both male and female organs, and cross-fertilisation, which can take place only when prothalliums of diverse varieties are in contact, then may pro-

duce distinct varieties, or if there be but the one variety present, that variety only is reproduced. I should very much like to learn whether Fern raisers artificially aid cross-fertilisation, or whether they sow spores of diverse varieties in combination and leave the rest to Nature. Certainly we have myriads of beautiful Ferns in commerce the product of cross-fertilisation.—A. D.

Gymnogramma schizophylla.—There are few stove Ferns that equal this species in its best forms, for it is an extremely handsome kind, easily grown if sufficient heat is at command, and an exquisite plant for baskets. It looks well on a pedestal or some similar arrangement, its long pendent fronds like showers of green, but it is easily checked and should not on any account be kept long in a cool or draughty room. The species may be easily propagated by means of the young plants that occur at the ends of the fronds, these being pegged down into small pots and cut off the parent plant when well rooted. The small pots may be allowed to get fairly full of roots before shifting into a larger size, for this Fern is impatient of a lot of loose material about its roots. On the other hand, it is not wise to allow the little plants to get badly pot-bound, or they will not start away freely. The best compost is one a little finer than that suited to the stronger-growing Ferns, and plenty of good coarse silver sand should be mixed with it. Drain the pots or baskets well and cover the crocks with a little rough peat or bog Moss. There is a fine form of this species (*gloriosa*) which is much stronger growing than the type, with longer gracefully arching fronds. It is a garden variety, obtained probably by selection.

FRUIT AND VEGETABLE CROPS.

MIDLAND.

Gopsall Hall, Atherstone.—The fruit crops this season in this neighbourhood are below the average, with the exception of bush fruits. Apples and Pears looked at one time most promising, the show of flower being abundant, but the cold, inclement weather, coupled with the superabundance of bloom, has been the cause of a show of Apples and Pears far below the average. The only Apples we have this season are Lord Sutfield, Tower of Glamis, Cellini, and Warner's King. Pears are more disappointing, Louise Bonne of Jersey, Beurré Diel, and Winter Nelis being the exceptions. Plums are a failure. Apricots are good, also Peaches and Nectarines, although somewhat small owing to the prolonged drought; Morello Cherries moderate, also Strawberries; bush fruits average crop. Rain is badly needed for all outside trees and crops.

The effect of the drought is most apparent on many vegetables, especially Peas, Beans, Turnips, and like crops, it being impossible to keep things free from thrips owing to the dry and arid atmosphere, the rainfall being below the average of several summers past.—J. LEE.

Hopton Gardens, Wirksworth.—Red, Black, and White Currants have very heavy crops of fine clean fruit. Gooseberries are very heavy. Cherries promised well, but the fruit dropped before coming to maturity. Pears are a failure and Plums are scarce. Apples are good, there being heavy crops on Cellini, Potts' Seedling, New Northern Greening, Ecklinville, Bramley's, Newton Wonder, King of Pippins, Duchess of Oldenburg, and New Hawthornden; moderate crops on Warner's King, Alfriston, Gascoigne's Scarlet, Lord Grosvenor, Bismarck, Worcester Pearmain, Royal George, and Margil. Strawberries are good; Raspberries an excellent crop of fine fruit. Old Apple trees sown down broke strongly, and the shoots are carrying a lot of fruit this year.—GEO. BOLAN.

Ossington, Newark.—Strawberries have been very good, especially the early varieties, the later kinds falling off from want of rain. Currants, Gooseberries, and Raspberries have

heavy crops; in fact I never saw these more plentiful. Plums are abundant in the neighbourhood. Apples and Pears are very fair, but not so early as in previous years. Apricots and Cherries are very fair.—A. WAGG.

Aston Hall, Aston-on-Trent, Derby.—The fruit in this garden is exceptionally fine this year, particularly Strawberries Royal Sovereign and Latest of All. The stone fruit is an average crop; Apples and Pears very good; Raspberries and Currants extra good.

Vegetables have turned out well as far as the season has gone.—JAMES LAW.

Worsley, Manchester.—Taken altogether, the fruit crop is not at all satisfactory. In bush fruits Currants are the only abundant crop. Gooseberries are very scarce, and Strawberries, though fairly good, were soon over. Raspberries are a good average crop. Pears are practically nil, a few fruits on early varieties being the exception. Early Apples are fair, but late ones scarce and the fruit poor; indeed, the trees seem to make no foliage. Stone fruits are a complete failure.

Vegetables are doing well generally. Summer crops of Cauliflowers, Broccoli, &c., I had a difficulty in starting during the dry, scorching time, but they are now fairly established. Peas and Beans are producing well and promise better for the future. Our humid climate seems to suit late Peas. They are seldom attacked with mildew, and usually fruit till killed by frost. Runner and French Beans revel in the heat and are making a great show of fruit. Potatoes look exceedingly well; those I am lifting are good in size and flavour and quite free from disease.—W. B. UPJOHN.

WALES.

Bodnant Gardens, Tal-y-Cafn, R.S.O.—Fruit, with the exception of Pears, is very fair in this neighbourhood. Small fruits have been fine; Currants a heavy crop; Strawberries average. Stone fruits are a fair crop; Apples average, some trees very heavily laden, chiefly cooking varieties; Pears almost a failure.—J. SAUNDERSON.

The Hendre, Monmouth.—Apples, both in orchards and upon pyramid and bush trees, are more than an average crop, and the fruit promises to be of excellent quality. The heaviest bearers upon pyramids are Cox's Orange, King of the Pippins, Sturmer Pippin, Duchess of Oldenburg, Wealthy, Worcester Pearmain, Belle Pontoise, Bismarck, Bramley's Seedling, Cellini, Dumelow's Seedling, Grenadier, New Hawthornden, Lane's Prince Albert, Lord Derby. Lord Grosvenor, Seaton House, Sandringham, Schoolmaster, The Queen, and Warner's King. The Pear crop is under average. It is best upon walls, although some pyramid trees carry good crops. The best bearers upon walls are Louise Bonne of Jersey, Durendean, Clapp's Favourite, Souvenir du Congrès, Easter Beurré, Marie Louise d'Uccle, Beurré Diel, and Prince Consort. Apricots and Peaches when in blossom were much damaged by 16° of frost, although protected by fish-netting; their crops are thin in consequence. Plums are also very thin upon walls, and the crop is below average, although some bushes of Victoria, Early Prolific, Early Transparent, and Jefferson carry good crops. Cherries are under average, but May Duke upon bushes is bearing heavy crops of fine fruit. Strawberries suffered from drought last season and did not crop so well as usual, but the quality was good. Royal Sovereign, Leader, Gunton Park, and Latest of All were the best. The last always does well upon our heavy soil. Bush fruits are abundant and fine, particularly so Gooseberries and Superlative Raspberries.—Tnos. COOMBER.

Castle Gardens, Cardiff.—Apple, Pear, Plum, and Cherry trees flowered luxuriantly this year and gave every promise of an abundant crop, but Pears and Plums set badly, and the crops of these are almost a complete failure in this district. Apples, with the exception of a few varieties, set well and are a heavy crop. Many of the

trees have had to be propped up to prevent the branches breaking under the great weight of fruit. All the fruit trees in the gardens here were mulched early in the season with a good thickness of rotten manure, and on that account they have withstood the long-continued heat and drought experienced here since the beginning of June with impunity. The Apple trees in particular are now making vigorous growth, which is free from insect pests of all kinds. Last year Apple trees suffered much from the attacks of aphids in the early part of the season, and the leaves and shoots in consequence of this were much honeydewed and had to be cut off and burned. Strawberries have been plentiful and good, but of shorter duration this season than usual on account of the drought. The fruits of Royal Sovereign were large, highly flavoured, and the crop heavy. The plants now are much infested with red spider. Peaches, Apricots, Gooseberries, and all kinds of Currants are bearing good crops in this district.—A. PETTIGREW.

Penrhos, Holyhead.—Stone fruits are very scarce; Apples and Pears under average; Strawberries have been very good; Red, White, and Black Currants are heavy crops, also Gooseberries; Raspberries are under average; Plums are good generally except in very exposed positions.

Vegetables are very good in quality with the exception of Carrots, which have been infested with grubs.—T. MAISH.

Wyastone Leys, Monmouth.—Apples are a good general crop; Pears are under the average. The sorts doing best are Beurré d'Amanlis, Bergamote d'Esperen, Doyenné Boussoch, Doyenné du Comice, Josephine de Malines, and Pitmaston Duchess, all trained as espaliers or on walls. Apricots are very thin. Gooseberries, Raspberries, and Currants have all been good, especially Black Currants. Peaches are a fair average; Plums a very light crop. Strawberries have been excellent; King of the Earlies, Vicomtesse Héricart de Thury, Latest of All, and Jubilee were very good. Royal Sovereign was by far the best. Walnuts and Filberts are above the average; Quinces and Medlars average crop. Cider and perry fruit is plentiful in this neighbourhood.

All vegetable crops have done well. Early Potatoes are very good, especially Sharpe's Victor. Late varieties until lately looked extremely well, but are now suffering from want of rain, '76 in. being the total for the month of July, and '06 in. on the 3rd ult. Reading Giant is taking the place of Magnum Bonum in this locality as a general crop. Peas have been exceptionally good. Runner Beans are bearing well, considering the drought. Early Cabbages are small; Cauliflowers, Savoys, and Broccoli are much in need of rain. Fully 50 per cent. are blind.—GEORGE PHILLIPS.

Gogerddan, Aberystwith.—In this district Plums and Cherries are almost a failure; Apples and Pears are a very thin crop; Gooseberries very good; Currants, Red, White, and Black, are a good crop; Raspberries are also good; Strawberries have been a fair crop.

Vegetables of all kinds are doing well in this district, the weather being favourable for all growing crops.—JAMES VEAREY.

Powis Castle, Welshpool.—A very fair crop on the whole. Apples are an average crop, the best bearers being Lord Grosvenor, Warner's King, Stirling Castle, Ecklinville Seedling, Annie Elizabeth, Pott's Seedling, Bismarck, Peasgood's Nonsuch, Lane's Prince Albert, Bramley's Seedling, Flanders Pippin, and Gascoigne's Scarlet Seedling. Pears are an average crop, the best being Doyenné du Comice, Louise Bonne of Jersey, Brockworth Park, Bergamote Heimbouurg, Beurré Diel, Beurré Rance, Pitmaston Duchess, Beurré d'Anjou, Souvenir du Congrès, and Glou Morceau. Plums are the only crop we are short of, Victoria and Rivers' Prolific being the only two bearing a fair crop. Damsons are scarce in this district, except in sheltered places. Peaches and Nectarines are bearing the best crop

outside for the past eight years, and yet we had sharp frost at the time of blooming. Apricots are fair; Strawberries good; and all small fruit abundant. Fruit trees in general are clean and healthy, and free of insect pests.

Owing to a wet, late spring, vegetable seeds did not germinate well, several kinds having to be sown twice. Potatoes are free of disease so far, early and late varieties included. The dry, hot weather is now beginning to tell on the Peas and all surface-rooting vegetables.—J. LAMBERT.

STOVE AND GREENHOUSE.

WINTER-FLOWERING BEGONIAS.

A SELECTION of the best flowering kinds of the shrubby evergreen Begonias will, if properly managed, be of good service both for the con-

servatory and for cutting during the dull months of winter. Although not so brilliant in colour nor so large in size of their blossoms as the tuberous-rooted kinds, yet there is much to admire in the large drooping bunches of white, rose or scarlet flowers which are borne by the winter-blooming Begonias. In addition to the true species of shrubby habit, from which many

useful garden plants might be selected, we have the more or less popular hybrids, of which *B. ascotensis*, *B. Knowsleyana*, *B. Ingrami*, and *B. insignis* are familiar examples. Some of the numerous forms of *B. semperflorens* are also favoured, because of their free-flowering and ornamental characters, and in the several recently distributed kinds, of which *B. Carrièrei* is one, we have other useful plants for service in winter. Other good useful plants, such as *B. Lynchiana* (Roetzli), *B. Listeri*, and *B. socotrana*, have recently been added to the cultivated species of this genus.

The following is a selection of the best kinds for growing as flowering plants for the winter:—

B. ASCOTENSIS.—A tall-growing plant, with large terminal drooping bunches of bright red flowers. A fine autumn and winter-flowering kind.

B. CORALLINA.—A woody-stemmed species with leaves green above and purple below, and bright red flowers in long pendent racemes. This species may be grown so as to flower either in winter or summer.

B. CARRIÉRI.—This is the result of a cross between *B. semperflorens* and *B. Schmidtii*. The flowers are nearly as large as those of *B. semperflorens*, pure white, and produced in abundance. It is a compact grower and flowers freely during the greater part of winter.

B. DIGSWELLIANA.—A hybrid raised from *B. odorata* crossed with *B. fuchsioides*. It is a short, robust grower, with medium-sized leaves and pale pink flowers.

B. DIPETALA.—A thick succulent-stemmed plant with pale green white spotted leaves and axillary drooping racemes of two-petalled large pink flowers. It does not thrive if kept longer than a year. Should be raised from summer-sown seeds.

B. FUCHSIODES.—This may be included here, as it flowers not only in summer, but on through the autumn and winter if favourably situated. The tall handsome habit and large branching pendent panicles of bright scarlet flowers are well known.

B. HERACLEIFOLIA (see cut).—A stemless species with long-stalked Heracleum-like leaves and very tall flower scapes bearing a large bunch of pale rose-coloured flowers. In early spring this plant is a handsome object.

B. INCARNATA.—A smooth red-stemmed plant, which is represented by several well-marked varieties. They are all large-flowered, rose-coloured, handsome, and useful for winter.

B. INGRAMI is hardly distinct from *B. Digswelliana*, being of the same parentage as that kind. It is a pretty flowered plant, and blooms freely in winter.

B. LYNCHIANA.—The immense heads of bright scarlet blossoms borne in winter by this species



Begonia heracleifolia.

are of great service both when cut and when allowed to remain on the plant. It is easily grown, and should become popular.

B. LINDLEYANA.—A fleshy, hairy-stemmed species, with rather large foliage and drooping panicles of white flowers.

B. MACULATA, also known as *B. argyrostigma*, is a stout grower, with oblong green leaves marked with silvery spots. The flowers are coral-red, and are borne in large drooping panicles.

B. NATALENSIS.—A tuberous-rooted species which dies down in summer and should be started in heat in autumn. The soft green of its thin papyry foliage and the numerous cymes of large pale rose flowers which it bears in winter are attractive and useful.

B. NITIDA.—Everyone knows this useful old plant, its large shining leaves, borne on stout fleshy stems, and its terminal and axillary panicles of large, rose-coloured, sweet-scented flowers being frequently met with in conservatories during winter and spring.

B. POLYPETALA.—A singular and handsome species, which grows about a foot high, and bears hairy leaves and several terminal flowers, which are red, the whole flower having the appearance of a small single Dahlia.

B. SCHMIDTII.—A dark green-leaved plant of compact habit, bearing numerous small white flowers, which are abundantly produced all over the plant, and form a pretty contrast to the foliage.

B. SEMPERFLORENS.—This is always in flower both winter and summer. By pinching out the flower-buds in the summer handsome specimen plants may be grown, and these in winter will flower freely. The flowers of the type are white, but there are also varieties of this which bear rose-coloured or pink and white blooms.

B. SOCOTRANA.—A pretty peltate-leaved plant with bright red flowers. It is a deciduous species, going to rest in spring to start again into growth in the early autumn.

B. SUAVEOLENS is closely related to *B. nitida*, from which it differs in having smaller flowers, which are pure white and fragrant. It is also known as *B. odorata*.

B. WELTONIENSIS.—An old garden favourite raised from *B. Sutherlandii*. Its graceful bunches of pink flowers are freely borne on the numerous branches of which the plant is composed.

Those beautiful varieties of the tuberous-rooted section, embracing the varieties *B. socotrana* and the hybrids raised therefrom, as *B. John Heal*, *B. Adonis*, and *B. Winter Gem*, are all extremely useful, lasting so long in good condition. The duration of the individual flowers is also remarkable.

Sowing Persian Cyclamen seed.—I prefer the month of August—about the 15th—for sowing seed of *Cyclamen persicum*, but it is not yet too late for those who favour autumn sowing; indeed, such has been the heat that slightly later sowings will perhaps this season germinate better and more quickly. A nice shady corner in an intermediate house I find the most suitable quarters until the plants are up, by which time no harm need be anticipated from sun-heat, and the pans or pots may be raised near the roof-glass and treated to all the light available. Loam of a light fibrous nature rubbed down fine with the hands, a fifth part leaf-mould, and some silver sand form an excellent medium for early rootage. Ample drainage must be provided, as *Cyclamen* roots resent the least approach to sourness in the soil. Great care is needed in watering the seed-pans, as a soddened surface is fatal to germination; in fact, it is safer to err on the dry than on the wet side. An intermediate condition is really the one to aim at. *Cyclamen* seed is somewhat slow in starting, but if more than, say, three weeks elapse before growth is discernible, the quality and age of the seed may be questioned. I have found the young seedlings do well in the above-named position throughout the winter, as here they will grow away slowly; whereas, in an

ordinary cool greenhouse the plants remain almost stationary till the longer days arrive. Potting off has generally been done in March, or, if the plants make good headway, in February, a temperature of from 65° to 70°, accompanied by a moist atmosphere and slight shade, being given till they become established in the small pots, when a gradual hardening off is necessary until they find a home in a cool frame turned towards the north.—GROWER.

THE BREAK UP OF THE DROUGHT.

THE hot, scorching weather has at last broken up, and instead of clear skies with the heat of the sun pouring down from morn till eve we have had cloudy skies and a much cooler atmosphere. The change here took place on the 6th inst. when the sky became overcast and thunder could be heard in the distance. The storm, however, passed by, but during the night several heavy showers of rain fell, and the morning of the 7th was ushered in with a heavy fall, which continued until the day had well advanced. After this it abated, and by midday it was nothing more than a drizzle, and in the afternoon the clouds cleared away and it became quite fine, when the air was deliciously cool and formed a very marked contrast to the hot, stifling atmosphere of the past few weeks. The dry, thirsty land, the burnt pastures, and scorched lawns sucked up the rain as it fell, and it was only on the hard paths and roads that any ran to waste. The pastures and lawns had previously presented a very woe-begone appearance, and looked, as a visitor from Australia remarked, like that country does after a prolonged drought. The grass is now, I am glad to say, beginning to recover, and already looks greener than it has done for weeks. The pastures have not as yet shown much sign of recovery, and they really need another such a soaking of rain as that they had last week. The root crops have greatly benefited by the rain, and already look much greener and healthier-looking than they did. In the garden the same beneficial effect is observable among all green crops, and both Broccoli and Cauliflowers, which have been quite at a standstill for the past six weeks, have now begun to grow again. The fruit crops are also looking much the better for the change, and the fruits have swelled considerably the past few days.

It will not, perhaps, be out of place while writing on the subject to note what effect the drought has had on the vegetable and fruit crops. Brassicas in general, as has already been mentioned, were brought up by the drought soon after the great heat set in, and Cauliflowers in particular refused to grow in spite of water being plentifully supplied to the roots, and in consequence there has been a dearth of these for the past month. Having become stunted, these latter, also Broccoli and Cabbage, will take some little time before they can recover. Advantage has been taken of the moist state of the ground to get out a large quantity of Rosette Coleworts and Little Pixie Cabbage, so as to be prepared in case such a contingency as a dearth of green vegetables should arise later on through the aforesaid Cabbages and Cauliflowers being too far gone to be of any further use. Scarlet Runners which were sown on a cool and somewhat shady piece of ground have not taken so much harm, and with the advent of cooler weather and the accession of a good supply of moisture to the roots, they should go on bearing until overtaken by frost. French Beans have fared much worse than the preceding, and it has only been by dint of hard labour in keeping them supplied with water that they have been kept in a growing condition at all. The Onion crop, perhaps, ripened up rather prematurely, but the bulbs are firm. There is, however, one advantage attending this, inasmuch that it has thrown the plot at liberty much earlier than would have been the case for the planting of spring Cabbages, the first hatch of which will be got out shortly. Carrots and Parsnips do not appear to have suffered in the least from the great heat and look

remarkably well, but Beetroot, on the contrary, has been greatly distressed. It is feared the crop will be greatly affected in consequence, as the roots are but as yet in many instances very small indeed. Turnips have also had a trying time of it, and it has been owing to nothing else but the fact that I grow the summer crop of these on borders having eastern and northern aspects that I have had any fit for use. Peas have also suffered greatly, and have had to be watered assiduously to be able to obtain anything like a supply. Lettuces and Endive on a north border have done well, and, being in almost daily demand, they, as a matter of course, have had a watering every day. A large break of Seakale grown for forcing looks remarkably well, which is mainly attributable to the fact of the soil having been deeply stirred and very liberally manured. Celery had to be watered frequently, and is in consequence looking none the worse for the ordeal it has passed through. With regard to late Potato crops, these are good; but, owing to the tubers having commenced to make second growth in many cases, lifting has had to be done earlier than usual. Among hardy fruits the principal sufferers are Strawberries, particularly the older plantations, which have been badly attacked with red spider. Younger plots have been much less affected and will now quickly recover, but the older plants mentioned will have no time to lose if they do so before winter sets in. Fresh-planted beds look well. These plants were got out about the middle of August, and have since been kept watered. Heavily laden Apple trees have begun to shed some of their fruits. These are mostly early kinds, but the drought no doubt has affected them to a certain extent. Peach trees have been kept well watered and are, with one or two exceptions, in a very healthy condition. In the latter case a little red spider appeared, which made headway while the fruit was ripening, but has now been dealt with. Pears have a little spider also, but beyond this, both in their case and that of other fruits, there is nothing to record. In conclusion it may then be stated that the effects of the drought are, taking everything into consideration, not nearly so disastrous here as they were last year, and if we are only favoured with rain again, and that before long, the vegetable supply from now and onwards will be a much better one than that of the latter part of 1898. A. W.

SOCIETIES AND EXHIBITIONS.

NATIONAL DAHLIA SOCIETY.

SEPTEMBER 19 AND 20.

THE exhibition of the National Society on the above dates at the Royal Aquarium, Westminster, was excellent. Although the National Chrysanthemum Society, for reasons best known to themselves, decided to discontinue their September show, it is gratifying to know that a ready response was made to an appeal for subscriptions for a special prize fund and an exhibition held in its stead by the society mentioned above. Only eight classes were provided in the schedule of prizes, these being equally divided between nurserymen and amateurs, each affording a capital display, in which the Cactus Dahlia was to the front. A spirited competition also took place in a class for seedling Dahlias, several first-class certificates being awarded. It was to the miscellaneous display, however, that the success of the venture was largely due. Gladioli were exhibited as usual by the Cambridge firm, and the fountain at the south-east end of the building was pleasingly decorated with a variety of plants. In past years it had been contended that a Dahlia show could not be held so late as the dates of the present exhibition, but the charming display of colour in the many forms on the dates in question proved conclusively this was not correct.

NURSERYMEN.

The leading class in this section was for twenty-four blooms of show and fancy Dahlias, distinct,

and there were eight competitors. The even form, bright and varied colours were beautifully represented by the leading stand, which came from Mr. John Walker, Thame, Oxon, who had a very handsome lot of blooms. Those calling for special notice were John Hickling, a very fine yellow; Harry Keith, rosy purple; Dorothy, self; John Walker, pure white; Mrs. David Saunders, a lovely lilac; Florence Tranter, blush white, edged rosy purple; Mr. Glasscock; Goldsmith, one of the best fancy flowers, yellow, striped and edged crimson; Duke of Fife, cardinal; Frank Pearce, rose, striped crimson; Queen of the Belgians, and Eclipse, a remarkable flower of the brightest orange scarlet. Mr. Charles Turner, Royal Nurseries, Slough, was placed second with smaller, but even flowers of good form, but not so bright as those in the first-prize stand. Specially good were Wm. Rawlings, crimson-purple; John Standish, heliotrope; Earl of Ravensworth, lilac; Arthur Cock, reddish orange; Mr. J. Downie; Chieftain, another beautiful lilac, and Alice Emily, a buff, with yellow edge to petals. The Cactus type flowers made a grand display in the leading class for twelve varieties, in bunches of six blooms. In this division Mr. James Stredwick, Silverhill Park, St. Leonards-on-Sea, took first place. This stand was undoubtedly a very handsome one, being by far the best of the kind in the exhibition. The blossoms in each bunch were of magnificent form and beautiful in colour, and they were also very nicely set up. Several handsome seedling sorts were included in this exhibit. The varieties were: Magnificent, a beautiful rosy salmon of exquisite form; Mary Service, Mayor Weston, deep reddish plum; Mrs. Sanders, soft yellow; Eclipse, the best of the yellows; William Jowett, Uncle Tom, Mayor Tuppeny, Viscountess Sherbrooke, reddish terracotta, shaded apricot, and others. The second prize fell to Messrs. Keynes, Williams and Co., Salisbury, who also had a very nice lot of blooms, including several pleasing variations, and, possibly, hardly considered so valuable as those of the truest form for exhibition. All the same, they were a very handsome lot of flowers. Those worthy of special notice were Britania, Chas. Woodbridge, Loadstone, Mrs. J. J. Crowe, clear yellow, of good form; Mrs. Carter Page, a new sort, rich reddish crimson, and Lucius, a beautiful deep orange flower. Not the least interesting section of the show was that devoted to the pompon type of the flower. These were, indeed, exceedingly pretty, well staged, and embraced a number of delightful little flowers. Judging by recent awards, it appears size is an uncertain quantity, and the exhibitor is no doubt entirely at the mercy of the individual taste of the judges. In the present instance the prizes were awarded to blooms rather smaller than usual, yet in this form their true character is undoubtedly exemplified. The first prize was awarded to Mr. M. V. Seale, the Nurseries, Sevenoaks, Kent, who had a charming display of neatly arranged bunches, twelve in number, each bunch containing ten blooms. Those worthy of notice were Sunny Day-break, pale apricot, edged rosy red; Douglas, deep maroon; Phoebe, deep golden-orange; Spitfire, very effective scarlet; Nellie Broomhead, lovely soft lilac; Hypatia, bright terracotta with golden centre; Nerissa, soft rose, very fine; Ganymede, amber; Ernest Harper, coral-red, and Snowflake, white. A good second was found in Mr. Chas. Turner, who also had a beautiful lot of bunches Bacchus, Mars, Capt. Boyton and Tommy Keith were each represented in grand form, and the exhibit was also charmingly arranged. There were no less than five exhibitors in this class. Singles were not so well shown as usual; the exceptional blooms of the late Mr. T. W. Girdlestone, who was unsurpassed in the way of arranging these fragile blossoms, were sadly missed. Only one exhibitor was forthcoming in the principal class for twelve varieties in bunches of ten blooms each. This came from Mr. Seale, who had a pretty lot of blossoms neatly displayed. His best varieties were the Geisha,

a pale terra-cotta and crushed strawberry beautifully blended; Beauty's Eye, lilac, crimson ring at base of petals; Phyllis, Demon, blackish-maroon; Yellow Perfection, Polly Eccles, fawn with red disc, and Leslie Seale, silvery-lilac, base of petals forming a crimson ring.

AMATEURS.

For twelve blooms show and fancy Dahlias, distinct, there were five competitors, the leading position being secured by Mr. Thos. Hobbs, Easton House, St. Mark's Road, Bristol, who had a very pretty, neat and even lot of blooms of good form and colour. Notable among them were Warrior, intense scarlet, very fine indeed; Jas. Cocker, deep purple; Mrs. Gladstone, Eldorado, Harrison Weir, primrose-yellow, and Duchess of York. Second honours were secured by Mr. F. W. Fellowes, Putteridge Grange, Luton, Beds, whose Bella (beautiful lilac), Chieftain, Warrior and Ranji were much admired. No less than eight competitors were seen in the class for nine varieties Cactus Dahlias, three blooms in each bunch. Mr. Robt. Keeble, gardener to Mr. F. W. Sharp, Waltham St. Lawrence, Twyford, Beds, was first with a very nice lot of blooms, clean, of even form, and also of rich colour, Starfish, Harry Stredwick (dark velvety maroon), J. F. Hudson, Viscountess Sherbrooke, Stella, and some beautiful examples of Mary Service. Mr. Fellowes followed with a good exhibit, Night, Mary Service, Britannia and C. Woodbridge calling for special mention. Six exhibitors made a display for six varieties of pompons, six blooms in each bunch. These again contained many charming little blossoms. Those securing first prize for Mr. J. F. Hudson, Gunnersbury House, Acton, W., were very small, but neat. This exhibit was a picture of neatness in the setting up, and the blossoms were beautifully finished. Eve, Nerissa, Orpheus, Phoebe, Douglas and E. F. Junker were those exhibited. Mr. W. C. Pagram, The Whim Gardens, Weybridge, was second with larger flowers, though lacking evenness and bright colours; Arthur West, Bacchus and Phoebe, however, were especially good. Mr. Hudson was again first among four competitors for six varieties, single, six blooms in each bunch. The staging was also good in this instance, and an even lot of flowers was represented by Donna Casilda (grand colour and form), Naomi Tighe, Phyllis and Jack Sheppard. Mr. E. Mawley, Rosebank, Berkhamsted, Herts, was second with a less even lot of flowers; Beauty's Eye, Cleopatra, Polly Eccles and Miss Roberts were in good form. A class was provided, open to all, for seedling Dahlias, and many received a first-class certificate. It was difficult in many instances to trace the name of the respective exhibitors owing to cards being misplaced; we cannot, therefore, give details respecting these.

MISCELLANEOUS.

As already stated, the miscellaneous exhibits composed by far the larger display on this occasion, and quite transformed the dreary aspect which this building usually presents. Dahlias, of course, were most largely shown, and their rich colours, combined with their varied forms, enhanced the beauty of the exhibition. A gold medal was awarded to Messrs. Dobbie and Co., Rothesay and Orpington, for a very large exhibit containing huge bunches of Cactus, decorative, and pompon Dahlias. These were set up in bunches containing no less than seventeen blooms and were very effective, although the form of the Cactus blossoms left much to be desired. A similar award was made to Messrs. John Laing and Sons, Forest Hill, S.E., for the decoration of the south-eastern fountain. This was surmounted by a fine Araucaria, Ivies, Euonymus, Golden Privet, Crataegus, Chrysanthemums, Heaths, and a great variety of other plants being arranged in a pleasing manner in suitable positions. Messrs. H. Cannell and Sons for some reason or other had their large table of some 200 bunches of Cactus and other Dahlias, and these pleasingly set off with Gypsophila paniculata and Eulalia macrantha, judged quite apart

from a lovely group of about 100 Cannas, receiving a silver-gilt medal for the former, and a silver medal for the latter. The display made by this firm was certainly one of the very best in the building, and as a whole was largely admired. A silver-gilt medal was awarded to Thos. S. Ware, Ltd., Hale Farm Nurseries, Tottenham, who made a handsome display on a large table of Cactus and pompon Dahlias. This exhibit represented most of the new varieties as well as those well known for their high merit. The pompons were very pretty, and these were disposed pleasingly at each end of the table. Mr. John Green, Norfolk Nurseries, Dereham, also staged a meritorious exhibit, arranging different varieties of Cactus Dahlias on tables in small triangular banks. This was very effective. The new Cactus Dahlia Zephyr, a cerise-pink of good form, seems destined to achieve distinction. A number of pompons were also staged (silver medal). Messrs. John Peed and Sons, of Roupell Park, Tulse Hill, S.E., set up a table of perennial Asters, their new Aster Mrs. W. Peters being represented in large numbers, also numerous other plants with Cactus Dahlias intermingled, for which a silver medal was awarded. The usual display of Gladioli from Messrs. J. Burrell and Co., Howe House Nursery, Cambridge, was forthcoming, and this is always interesting. The season has been a bad one for these plants, but notwithstanding this fact the spikes of blossoms were very handsome, and undoubtedly welcome. A few boxes of Tea Roses in bunches were also shown by this firm (silver medal). Mr. M. V. Seale, The Nurseries, Sevenoaks, secured a silver medal for a display of eleven dozen boards of Cactus, decorative, and show and fancy Dahlias in great variety. A similar award was made to Mr. J. T. West, Tower Hill, Brentwood, Essex, for a large representative table of Dahlias. The pompons here were particularly fine, and the display altogether was of a distinctly high order. Messrs. Carter, Page and Co., London Wall, E.C., also made a brilliant show, their system of staging each variety of the Dahlia in rows calling for special notice. This display was representative, and secured a silver medal. Bronze medals were awarded to the Devon Chrysanthemum Nursery, Teignmouth, for several stands of Cactus Dahlias, and to Mr. J. Williams, 4A, Oxford Road, Ealing, W., for a pretty table decoration of perennial Asters and single Cactus Dahlias. The Ichemic Guano Co., Lawes' Chemical Manure Co., Ltd., Messrs. D. Dowell and Son, Hammersmith, and Sam Deard, Harlow, made interesting exhibits, completely shutting out the north-western fountain.

NEW DAHLIAS AT THE CRYSTAL PALACE.

THERE was no lack of seedling Dahlias at the Crystal Palace on the occasion of the National Dahlia Society's exhibition. That they were composed largely of the Cactus type was to be expected, for there are now many raisers of seedlings and hundreds of new kinds are annually grown. It is necessary the standard of the Cactus Dahlia as an exhibition flower be set very high, because if a highly-refined flower like Charles Woodbridge be taken as a type, it is at once seen that high quality is necessary to reach it. To award certificates of merit to second-rate flowers is a mistake. A dozen of such awards was made at the Crystal Palace last week, and there is reason to fear there was not enough of several of these varieties submitted to enable a correct conclusion to be drawn.

The following Cactus varieties received the National Dahlia Society's certificate of merit: Mrs. Sanders, pale yellow, of a pleasing tint of colour, good Cactus shape; Mayor Weston, bright crimson, with a darker centre, a brilliant variety; Mayor Tuppeny, salmon-red, with yellow centre, a novel and distinct variety, of good Cactus character; Augustus Hare, rich orange-red, very bright; and Uncle Tom, shaded maroon, with

darker centre, fine Cactus build. All the foregoing five were raised and exhibited by Mr. J. Stredwick, Silver Hill, St. Leonards. William Treseder, the basal petals bluish, the other portions of the flower tinted delicate lilac, came from Mr. W. Treseder, Cardiff. Innovation, a very distinct and striking variety, the centre fluted petals red, with a slight tip of white, the basal petals deeply tipped with white; Emperor, ruby, flushed with purple and dark centre (it may be described as a purple *Gloriosa*, and is said to be of excellent habit); and Mrs. J. Crowe, delicate yellow, of good Cactus form, were shown by Messrs. Keyner, Williams and Co., Salisbury. Elsie, slight yellow ground, the petals suffused with a pleasing shade of magenta-purple, was shown by Messrs. J. Burrell and Co., Cambridge. Green's White, as shown, is decidedly the finest white Cactus yet character; and Zephyr, delicate soft rosy pink, is a charming variety. From Mr. J. Green, Norfolk Nursery, Dereham. Why the brilliant red Cactus Red Rover, a large number of finely developed blooms being staged, was passed over it is difficult to say, beyond the fact that it was considered by some too large, which is scarcely a recognised fault. The same award was made to two pretty single Dahlias—Girle, cream, with narrow side edgings of pale red, of excellent shape (from Miss E. J. Girdlestone, Sunningdale), and to Flame, pale orange, flaked and pencilled with orange-crimson, good shape (from Messrs. J. Cheal and Sons, Lowfield Nursery, Crawley).

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, September 26, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. At 3 o'clock a lecture on "Instructional Fruit Stations" will be given by Mr. E. Luckhurst.

The Royal Horticultural Society's great show of British-grown fruit will take place at the Crystal Palace on Thursday, September 28, and the two following days. Entries should reach the Royal Horticultural Society's office, 117, Victoria Street, S.W., not later than September 21. On each day of the show, after 10 a.m., Fellows of the society (on producing their tickets) will be admitted to the Palace free. The first notice on p. 3 of the schedule will be strictly carried out. It runs thus: "All fruit should bear its natural 'bloom'; any polishing process disqualifies."

NOTES OF THE WEEK.

Incarvilleas in Cornwall.—Of the three *Incarvilleas* growing here, *I. variabilis* is flowering this week, and I think its blooms the best shade of the three—a very good light rose colour. The *Turkestan Incarvillea Olga* seems more robust in habit, and *Incarvillea Delavayi* has seeded well this season. All are at the foot of a south wall.—C. R.

Lobelia Carmine Gem.—This is the finest of the herbaceous section. Its distinct colouring and its free and abundant flowering are points of importance. Though never perfectly at home without ample root moisture, these plants may still be grown with much success where attention is paid them and watering done with a liberal hand. This and a partially shady spot will assist in making the plant much more a success than would be the case otherwise.

Zephyranthes Atamasco is one of the prettiest of small bulbous plants when in flower. A closely allied form is *Z. candida*, which has, perhaps, a purer white flower, slightly larger in the buds and more distinctly an autumn-blooming plant than *Z. Atamasco*. *Z. candida*, also known as the Swamp Lily, is not infrequently well grown in this country without the aid of much moisture. It is better, however, where abundance of water can be given it, and this, accompanied by shelter or shade from some adjacent building, favours the flowering of the plant.

Punica Granatum.—On the terrace at Gunnersbury House are several grand plants of the Pomegranate growing in huge tubs, or rather specially designed boxes. These plants have been flowering this year with considerable freedom, the almost solid wax-like blossoms rendering the plants conspicuous.

Their present free-flowering is the result of a series of experiments, such as pruning hard, then lighter, and again more lightly still, till finally abandoned altogether. While pruning was adopted no flowers appeared. Now with the let-alone principle a good flowering is secured, the brilliant flowers making a fine display.

Romneya Coulteri in N. Wales.—I enclose a photograph of this beautiful plant as growing in the herbaceous border here. It is over 6 feet high and has had as many as fourteen fully expanded flowers at one time. The chief point about its culture is the protection it requires during the winter, after which it throws up strong shoots in the spring and commences flowering in June, and continues to do so until September. With care a plant will last many years without being disturbed.—G. J. SQUIBBS, *Llangedwyn, N. Wales*.

Kniphofias at Biel, East Lothian.—The terrace garden at Biel, in East Lothian, has long been known as one which presents some brilliant effects as well as showing how such gardens with southern exposures lend themselves to the growth of some beautiful, but tender shrubs. Very effective in September was a long line of *Kniphofias* along the front of one of the terraces. Either from above or from the beautiful turf beneath, this long row of the scarlet heads of the Torch Lily was very showy. *K. Uvaria* appears to be a favourite in the Lothians, as it was frequently seen in quantity.—S. A.

Polygonum baldschuanicum.—A plant of this eighteen months old flowered as usual in the early summer, and now, although the leaves are mostly shrivelled owing to the drought, it is flowering again even better than before. I do not know whether this is the ordinary behaviour of the plant, but if it were, I should have expected that MM. Lemoine would have mentioned it in their description. I have not noticed the "beau rouge" fruits they speak of, though there was a quantity of what appeared to be black seeds. Some of these were sown when ripe, but they have not yet germinated.—H. S., *Derby*.

Atriplex hortensis purpurea.—In the Earl of Haddington's gardens at Tynninghame, East Lothian, there is a little garden laid out in small beds filled with old-fashioned plants and herbs. Among the others seen in the middle of September were some fine plants of the purple-leaved form of the Sea Purslane or Orache. They must have been about 5 feet high, and their appearance suggested the thought that such easily raised plants might well be more largely used in place of others which require glass protection in winter. The purple-leaved Orache was very effective and rich-looking in appearance.—S. A.

Heliopsis Pitcheriana.—In very few of the composite family do we see the rich, indeed almost intense, orange gold that renders this plant so telling. Yellow in its many and varying shades abounds, but the intense colour of this plant is not nearly so frequent even among the Sunflowers and allied things. If only for its fine, distinct and rich colouring this plant deserves a conspicuous place among the best of autumn flowers. At present, however, it is only rarely seen, but employed in groups near to the Sunflowers its merits would be quickly seen. It may be that its size is against it, for it is not so large as the usual run of the perennial Sunflowers.

Dahlia Green's White.—In the Cactus section this is a promising flower. Apart from the flower there is much that is needed to make this, or indeed any variety, an improvement on the best kinds that have preceded it. Other good white flowers have come to the front with a great flourish of trumpets, but in not a few instances are found wanting when put into general cultivation. The Cactus Dahlia to-day is so much a garden plant, that it is by no means all-sufficient that a few good flowers may be cut upon a certain day for the exhibition board. If the above can lift its flowers aloft on stout stems it will certainly prove a welcome addition to the group, and like-

wise merit the awards that have been given it of late.

Kniphofia R. C. Affourtit.—Undoubtedly this is one of the grandest of the Red hot-poker family that has yet been distributed. It is stated to be a seedling from *K. corallina*, itself a hybrid form, but whether the present plant is a chance seedling raised from *K. corallina*, or whether the result of hybridisation is not clear. This, however, is of little importance. The rich and brilliant colour, so long retained that the uppermost pipes have assumed much colour before the old ones have faded, is even conspicuous among many good forms of this group. It flowers late, and is therefore a fine companion for Sunflowers, the earlier *Michaelmas Daisies*, and such plants.

Single Asters.—The Drill Hall on the occasion of the last meeting of the Royal Horticultural Society was enlivened by a variety of colours of the single Chinese Aster. Some of these were rather attractive, and it is more than likely would prove of considerable service from a cut-flower point of view. Despite the fact that the original has been so long uncultivated here, it would be interesting to learn in what particular this may differ from the single forms that occasionally appear among the double kinds and which are as promptly discarded. Seeing the rage for single flowers of all classes, it is significant that these Asters have been overlooked till now.

Aster acris at Whittinghame.—Among the perennial and annual plants in the bold groups in the beds at Whittinghame, the East Lothian property of the Right Hon. A. J. Balfour, M.P., is a fine form of *Aster acris*. Soil and situation do as much to modify the size and colour of Starworts as those of other flowers, so that one can hardly say with certainty whether the form was that known as *Aster acris* var. *dracunculoides* or not. It was, however, very like it. It was very effective in the middle of September, the bushes being a mass of large, deep-coloured flowers. In the beds at Whittinghame hardy perennials are largely used, but none were more worthy of remark than this Starwort.—S. A.

Origanum Tournefortii.—The tenderness of the Dittany of Crete (*Origanum Dictamnus*) has made one rather doubtful about growing a few of the other species which may be more amenable to our climate. One is led to think that we have rather neglected the distinct-looking Dittany of Amorgos (*O. Tournefortii*). This I saw a few days ago in the interesting collection of hardy plants grown at Cunningham, Fraser and Co.'s nursery at Edinburgh. It is of sub-shrubby habit and grows about a foot high. The flowers are pink and are more thickly arranged on the spike than is the case in *O. Dictamnus*. It seems to be hardy in the Comely Bank Nurseries, and as a rock garden plant is worthy of the notice of those who care for alpine of this kind.—S. ARNOTT.

Garrya elliptica in East Lothian.—At Tynninghame, the seat of the Earl of Haddington in East Lothian, there are some fine specimens of *Garrya elliptica* in the open. The truth is that this Californian shrub is much harder than some have supposed, and many who have been deterred from growing it through fear of its tenderness may safely try it either on walls or in the open. It is mostly grown as a wall shrub, but those who have seen good specimens in the open will be disposed to agree with the passage in "The English Flower Garden," which says: "If planted in a shrubbery near the path and not allowed to become crowded, its beauty can best be enjoyed." All the specimens observed at Tynninghame were fine, but one was exceptionally so with its deep green leaves and its elegant light green catkins in great numbers. Tynninghame is close to the sea, but on the east coast that does not mean much in the way of higher temperature.—S. A.

Hemerocallis aurantiaca major.—It may be welcome news to not a few who have invested in this first class perennial to know that it promises to be a good doer, if not quite so free as some other kinds in its mode of increase. The slowness of growth is, I take it, rather a gain

than otherwise, as the plant will in no sense be sufficiently prolific to become a weed for a long time to come. The rapid increase of such as *H. Kwanso*, *H. fulva*, and others is such, that constant reduction of the clumps or replanting is a necessity in light soils. The heavier soils are capable of providing more food for the plant for a longer period, and in this way the flowering does not suffer. The above plant, while possessing a good constitution, will be found quite at home in a fairly heavy soil, and perhaps not less so for the time being in lighter ones as well. Perhaps in growth this fine subject more nearly resembles *H. disticha* than any other, save, of course, the typical *H. aurantiaca*, of which so little unfortunately is known. Not in habit merely, but in the progress of its growth is it like this kind, and is therefore less abundantly tufted than all else, and quite distinct in its well-arching leaves.—E. J.

Catalpa syringæfolia fruiting. — While large examples of this handsome tree are not uncommon in this country, the instances of its fruiting abundantly are by no means plentiful, particularly so in and around London or in northern districts. Just now, however, a fine specimen of the tree in question is literally loaded with its pods of fruit in the gardens at Gunnersbury House. So numerous indeed are the pods, which hang from seven to ten in a cluster, that the tree is quite an attraction, the bunches of pods hanging over each other in remarkable profusion. The pods, the longest being 8 inches or more and not unlike those of the *Vanilla*, completely cover the tree for nearly one half on the sunny side, another portion inclining to east having but few pods. This, however, may have been due to an earlier flowering on this side and a subsequent frost damaging the blossom. The fruiting of the example in question is not unique in any way, though the present crop is regarded as the heaviest yet noticed. The colour of the pods is dark green, and is only varied by a slight coloration at the stalk.

Salvia splendens grandiflora. — Among the good plants that display themselves to advantage in early autumn is this modern improvement on *Salvia splendens*. The brilliant colour, the large blossoms, and the well-furnished extended spike are all points of importance in this excellent plant. By successional propagation it is possible to get a display for a very lengthened period; then with pinching and stopping far on into the season a good batch of plants can be retarded till quite late autumn for mixing with *Chrysanthemums* and other plants indoors. It should be borne in mind, however, that the cuttings must be secured when quite young; if at all hard, there is a possibility of their going early to flower without being half developed. In these circumstances, a few plants bedded out in a reserve plot and cut hard back will yield the requisite shoots, or the same plants may be kept in pots for the same purpose. It is a good plan, instead of keeping the old plants through the winter, to root a goodly batch of cuttings each autumn in a manure frame, and propagate from these again in spring. The old plants, however, make a fine array of colour in open beds, and where the latter are large, some may be retained for this purpose.

Cannas in tubs. — Replying to your inquiry re the treatment of the *Cannas* you noted in tubs at Nereworth, I did not disturb them last autumn, but placed the tubs in a frost-proof shed and withheld water. About the middle of February the plants were divided into pieces sufficiently small and potted into 6-inch pots, putting them on a shelf in an early Peach house, where they remained until the middle of April, removing them then to a cold pit. I planted them in the tubs the first week in May; by that date they had one strong growth from 12 inches to 18 inches, and other smaller growths pushing from the base. After planting I place the tubs against a south wall and cover with lights at night, or during rough weather until the end of May, when they are well established and ready

for placing in their summer quarters. Liquid manure is given freely as soon as the tubs are full of roots, occasionally substituting some other fertiliser. The compost used consists of fibrous loam (lumpy), spent hotbed manure, adding sifted lime rubbish and sand sufficient to keep the whole open. The two varieties grown are *Amiral Avellan* and *Joseph Bichon*. Last year I had *Duchess of York* and *Queen Charlotte* equally good, but, being of dwarf habit and green, these kinds are not nearly so effective in tubs. — J. WARREN, *Mercworth Castle Gardens, Kent*.

Lobelia Tupa. — The very distinct and uncommon *Lobelia Tupa* was well represented by a large bunch of cut flowers in the stand of Messrs. Cocker and Sons, of Aberdeen, at the Royal Caledonian Horticultural Society's show the other day. One does not often meet with it in gardens, and when seen it is generally represented by very small plants. Its comparative rarity is probably due to two causes. For one thing it has the reputation of being only half-hardy, and for another it is a remarkably difficult plant to break up without losing even a large specimen in the process. It is thus but seldom seen in such quantity as was shown by Messrs. Cocker and Sons. I made particular inquiry as to the hardiness of *L. Tupa* at Aberdeen, and was assured that it is hardy there, although the "granite city" is associated in people's minds with a somewhat unkindly climate. It does quite well in the S.W. of Scotland, like many other Chilean plants, and ought to be more generally tried, although it is said to be very poisonous. It is at times spoken of as *Lobelia Feuillei* and *Tupa Feuillei*. *L. Tupa* has flowers of reddish-scarlet and sessile, ovate-lanceolate leaves, clothed with whitish down. When established it will grow 6 feet or more high. The *Tupa* is a distinct and effective plant in its season. — S. ARNOTT.

Eucomis punctata. — There was a nice spike of *Eucomis punctata* in the table of plants sent for exhibition to the Edinburgh autumn show by Mr. John Forbes, of Hawick, N.B. It had a prominent place among the other cut flowers and attracted some notice, although those who care only for plants with bright colours could not be expected to admire it. It is, of course, an old plant, having been grown for many years as a greenhouse flower. One would not like to say that it is hardy everywhere in Great Britain, but from what I have seen of it in the south of Scotland I think it might be more largely taken advantage of in outdoor gardening, even if it had a slight covering of ashes, dry leaves, or litter during winter. I grew it here for several years, but it was lost one very dry summer from want of attention in the way of giving it a soaking with water. It has been grown in a neighbouring garden, where the soil is stiffer and where there are a few degrees more of frost, for a longer time, and is still doing well. One is confident that in moderately mild localities it might be grown with advantage. *Eucomis punctata* was introduced from the Cape of Good Hope more than 100 years ago, and appears to have been more popular a number of years ago than it has been of late. The long, channelled, oblong-lanceolate leaves are handsome, and the cylindrical scape bears a number of small green and brown flowers, which are topped by a tuft of bracts, whence is derived the name of *Eucomis*. *Eucomis punctata* appears to like a rather rich soil, where it will produce handsome spikes, which are, if not brilliant, very interesting and pretty in their way. The flowers have a peculiar sweet odour, not so pronounced as to be disagreeable, which attracts numbers of small flies to them. — S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

The weather in West Herts. — Yet another warm week, and the eleventh in succession. At no time, however, did the shade temperature rise above 70°. At 2 feet deep the ground is still about 2° above the September average, but at 1 foot deep it is about 1° colder than is seasonable. Rain fell on four days, but to the total

depth of less than half an inch. The sun shone on an average for 4½ hours a day, which is a good record for the time of year. I find that the past summer (June, July, and August) was the hottest and sunniest I have recorded since I came to Berkhamsted in 1885. The total rainfall was 3 inches below the mean, but exceeded that in the same three months in 1898 by about 2 inches. — E. M., *Berkhamsted*.

Claim to produce of garden. — I made an agreement (verbal) with a builder who bought some gardens that I should have fruit and produce for finding labour and watching it, the builder to have the ground when he wanted it for building. After spending about £10 on wages, &c., he says I am not to get any more fruit, as he wants to sell the ground. Can I recover in county court for value of fruit? — A.

* * The contract between you and the builder was, that until such time as the ground was wanted for building purposes you were to expend labour, &c., upon it and were to have the produce for your reward. You may, if you choose, take all the fruit that is now on the land, whether the builder wishes to sell or whether he has sold it or not, and if he forcibly prevents you or himself removes the fruit, or if it is removed by any person claiming through him, you may sue him in the county court to recover damages for breach of the verbal contract, the existence of which can be readily proved, and which, seeing that there has been part performance, cannot well be denied. — K. C. T.

PUBLIC GARDENS.

Opening of a new park at Ilford. — On Saturday afternoon the new Central Park at Ilford was opened by the chairman of the Urban District Council, Mr. W. W. Gilson. The park, which consists of 47 acres, contains a large lake and is prettily laid out with flower-beds and shrubberies.

Hampstead Green. — The Tree and Open Spaces Committee of the Hampstead Vestry have issued a report stating that they have carefully considered a letter from Sir Henry Harben, the chairman, intimating that upon his recommendation a lady had bought for £7500 the Hampstead Green property recently put up to auction for the sole purpose of enabling the vestry to make up their minds what they will do with regard to the green or paddock in front of the houses standing on the property, and that if the offers were sufficient she would dedicate the paddock to the public in order that it might be preserved as an open space for ever. In the opinion of the committee the opportunity now afforded by the generous and public-spirited action of the lady of maintaining the present picturesque and sylvan approach to Hampstead from London should not be lost, and they recommend that the necessary steps be taken for the acquisition of the green and the dedication thereof to the public. It is expected that the owners of property immediately adjoining and facing the green will subscribe towards the purchase, and the lady referred to, who wishes to remain anonymous, has said that she will herself make a contribution to the acquisition of the green.

Names of plants. — B. S. S. — A, *Eriophorum angustifolium*; B, *Phragmites communis*. — W. O. T. — The *Campanulas* are *C. rhomboidalis* and *C. latifolia* van Houttei. Please send better specimen of the other. — J. M. S. (*Colchester*). — 1, *Polygonum amplexicaule*; 2, *Ceanothus azureus*; 3, *Clerodendron fallax*; 4, send fuller specimen, with spike of coming flowers; 5, *Statice speciosa* probably. — P. Bosanquet. — Probably *Quercus Ilex* variety, but a fruiting branch is necessary to accurately determine. — Yorkist. — 1, *Begonia*, send better specimen; 2, *Hypericum* sp., flower too shrivelled; 3, *Polygonum spharostachyum*. — A. C. — Impossible to name without flowers.

Name of fruit. — H. Locke. — Plum Pond's Seedling.

THE GARDEN.

No. 1454.—VOL. LVI.]

[SEPTEMBER 30, 1899.]

INDEX.

(Illustrations in Italics.)

Roses:—		<i>Lily, the Madonna, in a Summer garden</i> 255	Plums, scarcity of 258	Stove and Greenhouse:—		<i>Aster Thomsoni</i> 270
Rose, a pretty Polyantha .. 254		<i>Lobelia for stock</i> 254	Strawberry St. Joseph .. 260	Allamandas 265		Rean, the Indian, fruiting of .. 269
Rose Duchess of Albany .. 254		<i>Nymphaea Froebeli</i> 256	Strawberries, flavour in .. 260	<i>Aristolochia gigas</i> 264		<i>Caryopteris mastacanthus</i> .. 269
Rose Earl of Pembroke .. 254		<i>Nymphaea stellata in the open air</i> 254	Strawberries, late 258	Begonia Gloire de Lorraine .. 264		<i>Chrysanthemum Lady Fitzwygram</i> (yellow variety) .. 269
Rose Maman Cochet 253		<i>Pelargonium Beauty</i> 257	Strawberries, late, on north borders 259	<i>Chironia ixifera</i> 265		<i>Chrysanthemum Mme. Liger</i> .. 269
Rose Mme. C. P. Strassheim .. 251		<i>Tropaeolum speciosum</i> 255	Vine borders, loose 259	<i>Crinum roseum</i> 264		<i>Ligustrum</i> 269
Rose Mrs R. G. Sharman .. 254			Vines, firm soil for 260	<i>Eucharis amazonica</i> 264		<i>Convolvulus mauritanicus</i> .. 269
Crawford 254			Vines, raising young 258	<i>Medinilla magnifica</i> 265		<i>Cyclamen hederifolium</i> .. 269
Rose Wm. Allen Richardson in bush form 251				Plumbago capensis 264		<i>Dahlia Mrs. Sanders</i> 269
Roses in September 253				Portlandia grandiflora 264		<i>Dahlia show at the Aquarium</i> 269
Roses, malformed 251				<i>Portlandia grandiflora</i> 264		<i>Iris Susiana at Tynning-hame, N.B.</i> 270
Roses, Monthly 253				Schubertia grandiflora 265		<i>Kniphofia Triumph</i> 269
Flower:—				Statice profusa 265		<i>Leucocjum roseum</i> 270
Bougainvillea glabra in Hyde Park 256				Witsenia corymbosa 264		<i>Monthretia crocosmiflora</i> .. 269
Clematis La France 257				Trees and Shrubs:—		<i>Phlox Le Mahdi</i> 270
Dahlia, Cactus, Magnificent .. 256				Mountain Ash, the 266		<i>Phygelius capensis</i> 269
Dahlia, Cactus, Mary Service 256				Spirea Anthony Waterer .. 266		<i>Ranunculus Lyalli</i> 269
Dahlia, Cactus 256				Tecoma radicans 266		<i>Romneya Coulteri in Scotland</i> 269
Dahlia, Cactus, at the Crystal Palace 256				<i>Wistaria, white, at The Larches, East Grinstead</i> .. 266		<i>Senecio pulcher</i> 269
Geranium Magenta Queen .. 256				Wistaria, the 266		<i>Statice penduliflora</i> 270
Leucocjum roseum 256						
Lilium rubellum 255						
Lily, the Madonna 255						
Orchard and Fruit:—						
Apple Peasgood's Nonsuch .. 259						
Apple Washington 260						
Apples, burnt refuse for .. 260						
Apples, gathering 258						
Birds and the Apple and Pear crops 259						
Figs, open-air 257						
Gooseberry Whitesmith .. 257						
Gooseberries, late 257						
Grape Foster's Seedling .. 258						
Melon Gunton Scarlet 260						
Melon Scarlet Premier 257						
Peaches and Nectarines, budding 258						
Pear Clapp's Favourite .. 259						
Pear Doyenne d'Alencon .. 260						
Pear Pitmaston on a south wall at Insh, N.B. 257						
Pear, the Pitmaston 257						
Plum Denniston's Superb .. 260						
Plum Early Violet 257						
Garden Flora:—						
Violets, the new giant 260						
Week's Work:—						
Fruits under glass, work among 261						
Kitchen garden, work in the .. 261						
Kitchen:—						
Beans, climbing 263						
Beets 263						
Insecticide, a good 262						
Kales, the vagaries of 262						
Leeks 263						
Lettuce White Chavigny .. 262						
Peas and drought 263						
Potatoes in the south 263						
Potatoes, soil for 262						
Vegetable Marrows 264						

ROSE GARDEN.

ROSES IN SEPTEMBER.

A WALK through a nursery where Roses are largely grown will, in flowering time, give one a good idea of kinds suitable for particular purposes, as all forms of culture are adopted to suit the tastes of different customers. Here a capital chance is provided to note kinds that are yet giving a nice display of bloom. One does not expect to find huge blossoms, such as are seen earlier in the season, but as the buds are not thinned, one sees large branches laden with pretty flowers so choice in the mass. This is especially the case with Teas and Hybrid Teas, the latter class, indeed, being a comparatively new one which has already furnished some exquisite varieties, and one likely to be still further improved by raisers of new kinds. La France was probably the kind from whence this class originated, and it is itself a most profuse bloomer even as late in the year as this. Mme. Abel Chatenay, a pretty shade of salmon-pink, is excellent on both standard plants and dwarfs. Kaisein Augusta Victoria is a first-rate white, every flower perfect and it is very free. Grace Darling, cream and pink, seems to put on more of the latter shade late in the year. Caroline Testout, a rival to La France, the shade of colour being more rich, bears fine clusters of bloom. Papa Gontier, rosy-crimson, is delightful in the bud state, although the flower is not over-double. In a mass it is a showy kind, the habit being dwarf and free. Viscountess Folkestone, white with pink and cream tints, is also remarkably free-blooming, standards giving a fine display. Souvenir de President Carnot seems a useful addition, the flesh-white flowers borne in abundance, each bud being of capital form. Laurette Messimy is classed as a China Rose. This is especially good. The salmon-pink flowers are not of over good shape individually, but massed they give a pretty display, and it is one of the most perpetual in blooming. Whilst noting China sorts, Queen Mab, apricot, tinted rose, and Duke of York, pink and white, were two new ones which appear most promising.

Fabvier and Cramoisi Supérieur, with crimson flowers, are also a mass of colour.

Of Tea Roses proper, not the least charming is Anna Olivier. The blooms have more buff colour late than earlier in the season. It is a branching grower and most abundant bloomer. Mme. de Watteville is pretty with its Picotee-like flowers. Another very free flowerer is Mme. Cusin, of a rosy purple shade. Mme. Lambard has flowers of varied shades, but late in the year rosy red predominates. Maman Cochet, creamy pink, and its white sport give abundant proof of merits beyond those of most kinds. Francisca Kruger, buff-yellow, is conspicuous for its freedom in flowering, and the buds are very pretty. Perle des Jardins and Sunset are richly coloured buff-yellow flowers, which come of a nice shape in late autumn. This period, too, evidently suits l'Idéal; it hues of colour are varied and most striking. Few of the Roses noted compare with Souvenir de la Malmaison. It never gives blooms so perfect as when seen late in the season. On standards it is especially happy, the clusters of flesh-white blooms are so abundant. Homère, again, is an old Rose always in bloom, and in autumn comes more perfect in form. This is very attractive on huge standard heads. No list of late sorts would be complete without Bridesmaid, Catherine Mermet, Muriel Grahame, and The Bride. They are less strong in growth than those named above, but are constant in flowering. That splendid Rose Maréchal Niel bears a few blooms late in the year on standards. This seems to be the only satisfactory way of cultivating it out-of-doors.

An acre of General Jacqueminot gives one the idea of its usefulness; it is one of the few true perpetuals among the class termed Hybrid Perpetuals. This and Fisher Holmes are not surpassed for the supply of dazzling crimson Roses in September, or, for that matter, the whole season. Mrs. John Laing bears a quantity of rose-coloured blooms, but, unlike the Teas, it does not flower in clusters. Mrs. R. G. Sharman Crawford, possibly a seedling from the above, is capital now. This has been a favourite of mine, and few sorts have so many good points. Ulrich Brunner gives an

abundant supply of rosy carmine blooms. It is also among the best of growers; the foliage is handsome and not liable to mildew. Auguste Rigotard and Dupuy Jamain, two cerise-shaded flowers, are capital, and Charles Lefebvre was noted as bearing a few choice dark crimson flowers.

The Japanese Rose, varieties of rugosa, are most attractive in autumn; they produce ornamental berries in great profusion, and as the plants grow freely, huge bushes may be obtained in a very few years. Grown on tall standard stems they form splendid objects. The single flowers in summer are pretty and they are sweetly scented. Alba and rubra, Belle Poitevine (rose colour), calocarpa (rose colour also), and Mme. G. Bruant (semi-double white) are the best forms. Some Roses which we esteem highly in summer are anything but pretty in September. Her Majesty has long shoots white with mildew, and Mme. G. Luizet is a variety in the same plight. H. S.

Monthly Roses.—What a treasure these delightful Roses are in a garden, and what other plant is there that can equal them for continuance of flowering and beauty? Not long since I cut out a good deal of the old growth and tied them into shape a little on a verandah here, but though this gave them a rather tight and smart appearance they have broken away from it again now, and are as natural-looking and pretty as ever and covered with bloom. The colours are soft and pretty, and they last well as cut flowers.—H. R.

Rose Maman Cochet.—This is one of the best of Tea Roses for garden or conservatory decoration, deeper in colour than Catherine Mermet and a little less pointed, otherwise it resembles it very much. The growth is equally as vigorous as is that of the well-known kind named, and it possesses in a marked degree the same property of throwing some grand blooms in autumn. Whether it will keep on flowering under glass in the same way I have not had opportunities for proving, but I should say it would, for I have just seen plants of it with scores of fine buds in all stages of development. It is, I believe, a Rose that has come to stop.—H. R.

Rose Germaine Trochon.—This Rose is not nearly so much known as it deserves to be. It is usually described as a climbing variety, but this

term is somewhat misleading. It would never do to plant it with the object of covering the front of a lofty dwelling. Roses of the rambling nature of Rêve d'Or are best for this purpose, but let Germaine Trochon be grown as a bush or standard and its beauty is soon revealed. The first year the plant makes growths about 5 feet long. Let these be pruned back to within 2 feet of the ground, then some five or six new growths will break out, each being when about 2 feet long crowned with a fine truss of blossom. The colour of Germaine Trochon is yellow, shading to nankin-yellow in the centre. It is a very hardy variety and has abundance of lovely glossy foliage. The flowers are large, full, and globular.—W.

Rose Duchess of Albany.—None of the La France race are more beautiful than the above variety in the autumn. The rich pink, approaching almost to red, is very marked, much more so than in the early summer. Like La France it is an abundant bloomer, but I believe the flowers are usually of better quality than those of its parent. I have found it a grand variety for pot culture either forced or grown cool. I am surprised market growers do not use it more. In strong heat the buds have a wonderfully rich colour, and its fragrance—or, at least, that of the La France tribe—is proverbial. I would advise gardeners requiring plenty of pink Roses during the early part of the London season to pot up a goodly number this autumn. Grown in cold pits the first season they should be in flower during May, and the second and subsequent seasons they, of course, could be had in bloom when required.—PHILOMEL.

Malformed Roses.—I was much interested in a plant of Homère which I met with recently growing against a gardener's cottage in almost pure gravel. This fine plant rarely produced those crippled flowers which everyone knows to be a great defect in an otherwise charming old Rose. From this I am inclined to believe that the remedy for such Roses which come badly quartered or otherwise malformed is to partially starve them. That fine Rose Maman Cochet is addicted to this splitting when grown upon very rich land. Surely it is better to have a perfect-shaped flower, if smaller, than a huge, but imperfect specimen. I think Homère a charming Rose when perfect, and in the autumn the rosy tint is especially rich. What fine standards one may see of this kind around London, which proves it to be a good town variety. Usually the soil of these suburban gardens is not very fertile, a fact that may account for this Rose flourishing so well.—W.

Rose William Allen Richardson in bush form.—Every Rose season there are complaints of the above variety producing badly coloured, almost white flowers. I have no doubt that aspect has most to do with this, but why not grow this favourite Rose as a bush? Just now some fine plants in this form are yielding richly coloured buds and flowers. Certainly they are somewhat straggling, but one does not want to see all our Rose plants of the compact form of a Baroness Rothschild. Where possible plant some W. A. Richardson in a western aspect, give them plenty of space, say 3 feet apart each way, and afford a handful of bone-meal per plant once a year, and I think there will be no trouble on the score of badly coloured flowers from such bushes. If a bed is planted, the centre plants could be trained in pillar form. Many of the vigorous Teas and Noisettes, notably Belle Lyonnaise, Bouquet d'Or, Mme. Eugène Verdier, one of the loveliest deep chamolys-yellow Roses we have, Celine Forestier, Mme. Pierre Cochet, Le Soleil, Mme. Moreau, and several others, are grand when grown in this way.—P.

Rose Mrs. R. G. Sharman Crawford.—In every respect, save its utter want of fragrance and its tendency to mildew, this Rose is a good one. It is flowering very freely this autumn, but the beauty of the plants is marred by mildew, to which they seem rather addicted. The colour of the flower is a lovely rosy pink, the outer petals

shaded with pale flesh. The form is cupped, slightly reflexed. The flowers are borne upon good stiff shoots, and may be cut with fine long stems. This Rose would be a grand kind to grow in quantity for cutting, as it comes earlier than many of the Hybrid Perpetuals, and most gardeners are aware of the value of pink Roses during May and June. For planting out under glass or for pot culture I cannot too highly recommend it. It is quite a different style of flower from its otherwise formidable rival, Mrs. John Laing, and the two could be most profitably grown in quantity for spring and early summer cutting. Mrs. Sharman Crawford makes a good head upon a standard, but if grown as a bush it should be planted in the background, for it will throw up in autumn some shoots quite 5 feet in height. It is unquestionably one of the best free-flowering Hybrid Perpetuals of recent years.—P.

NOTES AND QUESTIONS.—ROSES.

Rose Mme. C. P. Strassheim.—This variety has buds and growth not unlike those of G. Nabonnand, but the outer petals of the buds are heavily shaded with rosy pink and the inner petals a pretty buff colour. The expanded flower is large, not very double, but none the less beautiful on this account. It has an excellent bushy habit of growth, and the flowers are so very freely produced, that this Rose should be a valuable one for the flower garden.

Rose Earl of Pembroke.—I have often thought that there must be a certain amount of Tea blood in this Rose. For a Hybrid Perpetual in the autumn it is very free, and its large rich brownish crimson blossoms are most beautiful. At times the flowers are quite illumined with bright red. They are large, of globular form, and the buds fairly deep. The growth is vigorous, but not rank, and every shoot will blossom. Either as a standard, bush, or pot Rose this variety is good.

A pretty Polyantha Rose.—Just now Clothilde Soupert is flowering again very freely. It is really large for a Polyantha, but the perfect shape amply atones for this. The centre in autumn is a very pretty shade of rosy lake, the remainder of the blossom being pearly white. Doubtless many gardeners have proved its value as a good pot Rose for the conservatory. Such kinds as the above, Gloire de Polyantha, Perle d'Or, and Perle des Rouges, potted into 5-inch or 6-inch pots would make valuable decorative plants, and they have the merit of lasting for a considerable time in flower.—P.

FLOWER GARDEN.

NYPHÆA STELLATA IN THE OPEN AIR.

HAVING seen the article in THE GARDEN for September 10 (p. 193) on *Nymphæa stellata* and other hot-house *Nymphæas*, I send you my experience with them in the open air this summer. I have tanks into which I can let a steady flow of warm water if required, but the greater part of this summer it has not been required, the sun having kept the water warm enough without any artificial means. All the *Nymphæas* I have tried at present have done remarkably well except *Nymphæa Lotus*. This grows freely, but is very shy in flowering. *Nymphæa zanzibarensis purpurea* and *Nymphæa zanzibarensis rosea* grow and bloom very freely; the flowers are large and beautifully scented. *Nymphæa elegans* is a free-flowering blue variety from New Mexico. *Nymphæa stellata*, from tropical Africa, is the most charming of all the blue-flowered *Nymphæas*, the blooms large, of a very pleasing rather light blue, of beautiful shape, very sweet-scented, and produced very freely. *Nymphæa dentata*, a hybrid night-blooming white, is a very robust grower, but not free-flowering. *Nymphæa amazonica*, from Jamaica, I think, is the very best of the white night-flowering Water Lilies, the blooms large, pure white, and freely produced. *Nymphæa*

devoniensis, a real gem, very bright crimson, flowers well and grows freely; the blooms open in the night, but keep open till mid-day. The tanks are about 2 feet deep, with 18 inches of water and 6 inches of mud. I pot the *Nymphæas*, as I have before stated in these columns, in large Orchid pans, which allow the roots to ramble out through the holes into the mud. They are put out into these open-air tanks at the end of May or first week in June, and the pans are well pushed into the mud. The plants soon start making new growth, and send up flowers freely through July and August. After that the flowers are not so freely produced, but they still keep appearing until October, when the plants are lifted and wintered in a warm pit. *Nymphæa capensis* has flowered very freely here in the ponds with the Marliac Lilies, and a beautiful addition it makes, the light blue flowers looking charming with the various shades of red, yellow, and pink of the Marliac varieties. This plant will not stand the winter, and is treated the same as the tropical *Nymphæas*. *Eichornia azurea* is a pretty plant for shallow water near the edge of ponds planted with the various coloured Water Lilies. Its mauve spikes of bloom look extremely pretty. *Eichornia crassipes* I have grown for several years, but have only seen it in bloom once. These two *Eichornias*, as Mr. Hudson remarks, will not stand the winter outdoors, but small bits of *Eichornia azurea*, planted out the first week in June, soon spread and very quickly come into flower. *Pontederia montevidensis* is taller than cordata and the flower-spikes are much larger. *Limncharis Humboldtiana* is a charming plant, with large yellow flowers standing 2 inches to 3 inches above the surface of the water. It is very effective for shallow ponds, but I have failed to bring it safely through a hard winter.—W. J. TOWNSEND, Sandhurst Lodge.

—As is the case in a few other places this year, the above *Nymphæa* has also flowered here somewhat freely (for the first time) under similar conditions and among Marliac's hybrids excepting that the plants are lifted in November, wintered indoors and planted out in April. Dearly as I would like, I cannot look forward with confidence to this free blooming annually, as undoubtedly we owe it this year to the prolonged and intense heat and sunshine, and as such seasons are more the exception than the rule, so must an outdoor floral display of this tender and lovely *Nymphæa* also be, I fear, at any rate thus far north. Its success and regular blooming, of course, are assured where the water can be heated and in some cases covered with glass as recorded, the former of which is impracticable in most places, and the latter conditions for its growth place it entirely outside the pale of hardy plants. Treated as a hardy Water Lily in association with and under the same conditions as Marliac's and other hybrids, I much doubt if it will prove satisfactory in all seasons.—JNO. ROBERTS, The Gardens, Tan-y-bwlch, N. Wales.

Lobelias for stock.—Though good plants may be obtained from seed, this method of propagation is not altogether reliable, and it is advisable to rely on cuttings for the next season's supply. To do this it is a good plan to grow a few plants in pots during the summer, as these keep through the winter better than if lifted from the beds. When it is necessary to resort to the latter means some care is necessary owing to the tendency of lifted plants to damp off during the winter. It may not be generally known that a good way of obviating this evil is to select a number of plants for stock and to go over them a short time before lifting and cut off the tops. When the plants again break into growth they should be lifted and potted. Treated in this way they invariably keep through the winter without difficulty.—H.

LILIUM RUBELLUM.

MR. PETER BARR, who is staying in Japan, in a letter to Mr. Unger, head of the firm of L. Boehmer and Co., Yokohama, writes as follows concerning this Lily:—

I am very glad to know that you have secured a nice lot of that most beautiful and most refined of all Japanese Lilies, *Lilium rubellum*. When in New York in 1898 I saw THE GARDEN plate of this Lily and thought it a form of *L. Krameri*, but since seeing *L. rubellum* flowering in Japan I consider it a good species, and am sure it will be extensively cultivated when better known and its culture understood. I cannot conceive of anything more beautiful than a 5-inch pot with three plants of this lovely Lily in flower in the month of April or early in May. It is one of the earliest Lilies, flowering a month earlier than *L. Krameri*. It grows about 1 foot high. The colour of the flower is more or less that of *L. Krameri*, but the

been and how many failures I should have escaped had shippers of Lilies been generous enough to accompany with the Lily bulbs that amount of information that would have helped growers to adapt their cultivation to the wants of their newly-imported friends.

Now, supposing the information I have had from the collectors and the shippers be correct, I hope in your own interest as well as in the interest of your clients you will give what assistance you can, and as I have made a special study of *L. Krameri* wild and cultivated, I will, at the risk of giving offence, state the conditions surrounding the wild and cultivated *L. Krameri*, and offer my suggestions on the successful cultivation of *L. rubellum*. When I first saw *L. rubellum* I had just returned from a southern tour. I found *L. Krameri* in a Pine forest with a thick undergrowth of brushwood, and in this thick tangle of roots this Lily grew. I had it lifted, and to my surprise found no soil adhering.

deciduous bushes where the roots in winter will keep the bulbs comparatively dry and shade the plants from the hot sunshine in April and May.

I think you should caution your clients against exposing the bulbs to a dry atmosphere. The scales are thin and soon shrivel; therefore, if they cannot be potted up or planted out at once they should be buried in dry soil or placed out of doors in a northern aspect, where the bulbs will take no injury from the weather and be kept plump.

THE MADONNA LILY.

I ENCLOSE a photo of a group of *Lilium candidum* in our garden. The bulbs were planted two years ago (old bulbs then), and have had no attention with the exception that two months ago I gave them plenty of water, as I noticed that the lower leaves were turning brown. One plant had a stem 5 feet long and $3\frac{1}{2}$ inches in circumference, with twenty large flowers.

ALWYNE SCRASE-DICKINS.

A feast of Dahlias—Any stranger or even a casual observer on getting a view into the Drill Hall recently may have readily surmised that the show was a special Dahlia exhibition rather than one of the ordinary fortnightly meetings. It certainly was no ordinary meeting from one standpoint, for the extraordinary in-gathering of Dahlias was alone a refutation of this, so great were they in numbers and so fine in quality. Nor was the quality an isolated instance; it was, indeed, general, and from a singularly varied and wide-reaching area. Those that appeared in much the strongest force were the Cactus kinds, a set that without doubt is attaining popularity by leaps and bounds. The great numbers of these with all their vivid colours render them the most striking of garden plants at their time of flowering. Some of the rose-magenta shades, or salmon with silvery edges, are extremely pretty and very attractive at first sight. An especially good flower in this line is *Zephyr*, which is described as a "high coloured rosy pink with tints of heliotrope and bluish hues." It is, however, a most attractive kind, such as would please a large number. But, perhaps, the finest of all the Cactus Dahlias at the Drill Hall meeting was the exquisite yellow kind Mrs. J. Crowe, a really beautiful and fascinating flower in which the long attenuated forets are finely incurved. The narrowness of the forets gives it an elegant and graceful bearing, and in its colour it will, provided it is a good doer, prove a useful and valuable addition to the group. It is perhaps the finest self yellow that has yet been raised.—E. J.

Tropæolum speciosum.—I think your Scottish readers over the border must be amused at the constant reference made to this beautiful plant and at the rejoicing expressed when the difficulties of cultivating it are overcome, for in Scotland there are no difficulties, and it is a perfect weed, in most places climbing up trees, covering walls and fences, and making itself at home everywhere. We in the south of England have, on the other hand, found a great difficulty in acclimatizing it—not that it is injured by frost or that the roots suffer from drought or moisture, but because we cannot get it to flower. However, it seems to me that difficulty is being overcome, for I hear from many places statements of its success, but I think that the case of a plant in my neighbour's garden (the Rev. H. W. Russell, of Hothfield Rectory) has a peculiar interest. He had planted the bulbs against a fence which faced about S.W. Here they blossomed, but last year the plants seemed to have disappeared. On looking over the fence, however, his gardener found a space of about 15 feet one mass of brilliant scarlet. It must be remembered that last winter was a very mild one and the shoots remained alive all the winter. This spring he brought some of them under the fence and against the side where it was originally planted; here it has flowered most profusely, and that is from the old shoots of last



The Madonna Lily in a Sussex garden. From a photograph sent by Miss A. Scrase-Dickins, Newells Cottage, Horsham.

height is about one-third and the leaves shorter and paler green.

On May 8 I was wandering up towards the racecourse and came upon a little nursery outside of Yokohama, and, looking over the hedge, I saw under a bush some Lilies. One of these was a stranger to me, and, desiring a closer examination, I went inside and learned it was *L. rubellum*. I was full of delight, and at once set to work to find out all about my new friend. Having just returned from a southern tour where I had seen *L. Krameri* growing wild and also cultivated, I saw the difference and superiority of *L. rubellum* for pot culture, and I may say also for outdoor culture. Collectors told me it came from the north, and as I had no chance to visit its home, I learned from yourself and other shippers that my information was correct, and on further inquiry found that the two species grew under similar conditions. This being so, I think you should make this known to your numerous clients. As one of the oldest Lily cultivators, I know how grateful I should have

The bulb was actually living amongst the roots of the brushwood with its roots in the vegetable soil, and yet the plant was healthy and in bud. A few days later I was wandering about the grounds of one of the many temples, and came upon a flower garden surrounded by a high bank covered with Azaleas and capped with trees, which threw a partial shade on the parterre. The beds were raised 1 foot above the paths, and in one of them I found *L. Krameri* in the most robust of health, stem black, and leaves of the darkest green. The soil was as poor, stony, and dry as one could possibly imagine, and I felt that herein lay the secret of the health of the Lily. I feel, therefore, no hesitation in recommending that *L. rubellum* in pots should be grown in poor, stony, sandy loam with at least 2 inches of drainage, and very judiciously watered from the time of potting. The soil must be kept moist, but never wet, and success will be sure to follow. Out of doors I would recommend a northern or eastern dry bank, and, failing this, plant under

year, and so late as the last week in August, when I was in Mr. Russell's garden, he gathered a spray covered with beautiful blossoms, which proved, I think, its complete hardiness, for although we had a mild winter, we had a few sharp frosts, and especially in the latter part of May. I think perhaps this statement may encourage some who have lost heart in trying to get it to bloom. My own roots, which were planted in a tub, grew very well, but they had only two or three flowers. I think perhaps that I made a mistake in putting too many roots in a circumscribed space, thus giving them no chance to develop themselves.—DELTA.

Cactus Dahlias at the Crystal Palace.—"A. D." puts into the note in the schedule of prizes of the National Dahlia Society affecting seedlings a good deal that does not appear in it. It simply states that blooms of "Cactus, decorative, pompon and single Dahlias must be staged with stems not less than 9 inches in length, without wire or artificial support of any kind, in order that the committee may judge of the habit of the plant and nature of the flower-stem." That is all. It is not required that the stems be stout and the flowers erect; the 9-inch stem is insisted upon with a view of throwing out those varieties which, having very short stems, hide their flowers in their foliage. Stout flower-stalks and erect will come presently. The work of improvement has so far been mainly directed to securing the best Cactus type in the flowers as well as variety in colour; the others matters—very important, I admit—will come in due course. A 9-inch stem is long enough for exhibition and decorative purposes, and it is not everyone who admires the Dahlia with erect stems; some like them a little pendent. I venture to assert, after a long experience of such matters, that the members of the Dahlia trade can be trusted to deal impartially with seedling Dahlias. They grow collections and know the varieties well, hence their value in a judicial capacity.—R. D.

Cactus Dahlia Mary Service.—The recent Dahlia exhibition at the Crystal Palace furnished renewed evidence of the excellence of this variety. It was to be seen on most of the best stands of Cactus Dahlias, and in almost every case its form and shape were such as to secure the maximum number of points allowed to a single variety. It has now been exhibited for three years and grown for two by those who keep their collections up-to-date, and we have sufficient experience of it to decide its place amongst the Cactus kinds. In my opinion it is the finest variety for exhibition that has yet been sent out. If we want to form a definite idea in our minds of what the ideal Cactus Dahlia should be like, we cannot find a better example than an exhibition bloom of Mary Service. The colour will not appeal to everybody, but that is not the point we are considering. The form of the flower is the nearest approach to perfection that we have, with the possible exception of one of this year's seedlings just certificated. Not only are the individual blooms good, but the habit of growth is such as to render it a desirable garden plant. A dense green bush is formed 4 feet in height and covered with medium-sized blooms, not with so many well-developed petals as are seen at exhibitions, it is true, but yet better than those of most varieties. Even when well thinned out to get larger flowers the plant presents a handsome appearance, for the blooms do not come below the foliage. It is one of the best garden kinds as well as the best for exhibition, and its price is now such as to put it within the reach of everybody.—J. F. H.

Leucocum roseum.—I see in THE GARDEN of last week (p. 239) a note from my friend Mr. Ewbank asking for information as to the culture of the above plant. This, I fear, I cannot give him, except by stating my own experience with this little late summer-flowering bulb which I got from Dammannat Naples, probably about four years ago, either directly at his recommendation or from having seen it praised by him in one of his communications to this paper. As Mr. Ewbank is familiar with the conditions of my garden, he

can draw his own conclusions from the facts. I cannot now recollect whether I started with one or two bulbs, but I think it more likely to have been one, for as these things go they are, or were, rather expensive, if I rightly remember. At any rate I got a bulb, probably in 1896, planted it in common soil facing such sun as I have to show it, and had a somewhat feeble bloom late in the summer of 1897. Last year, as well as I can recollect, there was no sign of a flower, but this year it came into bloom a few days before I left home on August 18, and on my return, after nearly five weeks' absence, on the 21st inst. I find it still with a few flowers, having thrown up no less than ten flowering spikes, and that in spite of the fact that it is well-nigh smothered with a colony of seedlings of *Lithospermum tinctorium*, which, somewhat to my surprise, have sprung up on and round the spot where their "miffy" mother expired (without assigning reasons) in the early spring. *L. roseum* here at any rate seems to be absolutely evergreen, i.e., I never remember to have noticed the short green, Rush-like leaves absolutely disappear even in the depth of the winter. I do not know that I quite share my friend's enthusiasm about this, at any rate regarded as a garden plant, though if one had happened to find it wild for oneself during a ramble in Southern Italy, I can well imagine becoming greatly excited about it and having a strong desire to immediately transfer it to one's garden. No doubt the habit is graceful and the flowers are pretty, though they seem to have little claim to the epithet *roseum*, but they are small, and they steal into the world at a time when, to my mind, they are not wanted, and at any rate are apt to be overlooked.—J. C. L.

CACTUS DAHLIAS.

IN THE GARDEN of September 16 are two articles on the above subject signed "H. S." and "A. D.," the latter article being entitled "Cactus Dahlias at the Crystal Palace." Having had considerable experience in growing these lovely flowers for some years past, I quite agree with the first article, and commend it to the notice of those who want to know what varieties to grow, at the same time emphasising the writer's condemnation of Daffodil and Ranji and his approval of Britannia, which, though its colour is not universally liked, is certainly one of the finest varieties in cultivation. Magnificent, however, contrary to the experience of "H. S.," has given me the greatest satisfaction. It ought to be grown in even the smallest collection of Cactus Dahlias. Excellent as is the article just referred to, the same cannot be said about the second. Intending growers who take it as a guide will be in danger of finding themselves disappointed. It contains some inaccurate statements, which appear to be due to want of experience of Cactus Dahlias in the garden, on the part of the writer. Passing over some unnecessary remarks on the requirements of the committee of the National Dahlia Society, a list of varieties is given which were well shown, and it is said that new kinds must be good to excel them. As a matter of fact, some of them have been discarded already by many growers, and some are of very bad habit. Countess of Gosford is not scarlet in colour, and it has practically disappeared from exhibition stands. Lady Penzance, as everybody knows, produces its flowers quite beneath the foliage, and sometimes with stems an inch in length. It has a lovely colour, but we may expect it to rapidly go out of cultivation now that there are better yellows. Ranji does not show much promise, and ought not to be recommended. Night is an excellent dark variety for general cultivation. Harmony, again, is no longer amongst the best varieties. It would not be difficult to make a list of eighteen varieties, of different colours, all of good habit and suitable for garden or exhibition. Why, then, should some of those named by "A. D." be included? One more point. It is impossible to draw fair conclusions from the condition of the Chiswick collection during the first fortnight of September. On

account of the drought, many varieties there were almost unrecognisable at that time, and not yet really in flower. As a matter of fact, a great deal has been done by raisers to get dwarfier habit and flowers above the foliage. It is surprising that such progress has been made in so short a time. There are now good varieties that are quite dwarf enough. It is not necessary to wait a long time for Cactus Dahlias to become effective for garden decoration; the time has already arrived when they can be used with good effect, given only a judicious choice of varieties. CACTUS.

Geranium Magenta Queen.—The above is the name of a Geranium I saw last week in the flower garden at Blickling Hall. What struck me most about it was its more than ordinary loose, free character of growth and the length of stem the trusses had. The latter were of great size and depth and were borne freely. In a small garden this variety would perhaps be deemed too straggling, especially when grouped with other dwarfier and more compact varieties, but in such a diversified garden as that of Blickling, where only a few Geranium beds exist, and these wide apart, Magenta Queen is certainly very effective. A fairly sustaining, though not a rich root-run is what Geraniums need if a solid, free-flowering growth is to be secured. An amateur of my acquaintance had this season a very good bed of *Vesuvius*, but he could not let well alone, and by watering them freely with liquid manure caused the plants to grow quite out of character, the said growth being almost minus flower-trusses.—J. C.

Bougainvillea glabra in Hyde Park.—Numerous examples of this in Hyde Park are now (the middle of September) profusely laden with their bright coloured bracts. The bracts are of a particularly rich tint, owing doubtless to the large amount of sunshine experienced during the growing season. Besides this *Bougainvillea*, large specimens of several other greenhouse subjects are flowering freely. Grand examples of *Plumbago capensis* laden with their charming porcelain-blue blossoms are there, while *Cassia corymbosa* is still bearing a great number of its bright golden flowers. Clusters of the reddish orange blossoms of *Browallia* (*Streptosolen*) *Jamesoni* are from their distinct tint particularly noticeable, and large *Heliotropes* and *Fuchsias* are as usual laden with bloom. Lastly, there is a bed of the Coral Tree (*Erythrina cristagalli*) the blossoms of which are nearly over, yet still enough remain to show what a grand display there was a few weeks ago.—T.

Cactus Dahlia Magnificent.—This variety, sent out last spring, is already proving itself true to its name. One of the best for exhibition, it will be still more useful in the garden. Having four plants, I can judge its character with sufficient exactness, and have decided to make a great feature of it as a border plant next year. It is the best variety for this work that I have. At last a Cactus Dahlia has been raised of such excellent habit that it can scarcely be improved upon. A group of half a dozen plants in a large border would have a most telling effect. The colour is very striking. The flowers are produced in profusion well above the foliage, and are of extra large average size. No thinning or disbudding is needed to get large blooms of this variety. Even if the flowers should in the course of two or three years be superseded by others of superior quality and a similar colour, this variety will still remain a most valuable one for ordinary garden use. Given a few more kinds of similar growth, and the Cactus Dahlia will be in no danger of a decline of popularity for years to come.—J. F. H.

NOTES AND QUESTIONS.—FLOWER.

Nymphaea Froebeli.—I have had *Nymphaea alba rosea* (Caspari) in my tank more than forty years. I always tried to obtain a finer variety of this type from seedlings, but most of the seedlings revert to *N. alba*. I had no other *Nymphaeas*, and no pollen of any other *Nymphaea* is connected with *N. Froebeli*,

which is simply an improvement on *N. alba rosea*.—OTTO FROEBEL.

Pelargonium Beauty.—Some time back I had occasion to send a note regarding the excellence of this *Pelargonium* as a pot plant, and intimated that I was also using it in the flower garden. At that time I had no doubt whatever that it would be a great success, and it has proved to be so. I had three small beds filled with it, and the brilliancy of the flowers, the freedom with which they are produced, and the dwarf, compact habit of the plants have evoked expressions of admiration from all who have seen them.—A. W.

Clematis La France—This is the clearest and most intense of the blue shades. A very conspicuous characteristic of this variety is the whitish bands down the centre of each petal on the under side and also the dark anthers. It is not so effective perhaps as *Jackman*, but a great advance in colour. I am surprised that these *Clematis* are not more often employed by gardeners for greenhouse work. Even small specimens in 6-inch pots are very effective, especially if allowed to grow in their natural manner. I cannot say I admire the perfect balloon-shaped specimens one is accustomed to see at the Temple show.—P.

ORCHARD AND FRUIT GARDEN.

THE PITMASTON PEAR.

WITH the exception of the stewing kinds, this is one of the largest varieties in cultivation in this country, if not the largest, and evidence of this may be seen at many of the exhibitions of fruit held in various places each autumn. In an ordinary way, or, in other words, when the trees receive no special attention in the way of cultivation, the fruits attain a good size, but when specially treated they then assume enormous proportions, and single fruits have been known to weigh upwards of a pound and a half each. Such fruits are of course only fit for the exhibition table, they being far too large for cooking, and should therefore be grown extra large for that purpose only. It is a free-fruited variety, but if the trees are not overcropped the produce will average half a pound each in weight, and when grown for market such fruits always meet with a ready sale. It is also a hardy, vigorous grower, succeeding remarkably well either as a bush, pyramid or cordon. Low and high standards may also be planted, but on account of the fruit attaining such a large size I should advise their being planted in sheltered positions only. Bushes planted from 9 ft. to 12 ft. apart and allowed to extend would give splendid results—in fact, for market this is unquestionably the best way to grow this Pear. Although so popular, as a market variety *Pitmaston Duchess* has not yet received full recognition, but it will, in my opinion, play an important part in the future for this purpose. If the fruits are gathered just before they ripen, but while yet quite firm, and at once carefully and tastefully packed in boxes and despatched to market, their handsome appearance alone would secure them a ready sale. For the private garden it is also valuable, and may be grown either against a wall or out in the open, according to locality. That it succeeds in most districts or wherever the Pear can be grown may be gathered from the illustration, which shows it does well as far north as Scotland. Fruits taken from trees out in the open are generally more russet than those grown on walls, but they are, I think, much the highest flavoured. Wall fruits have as a rule very clear and bright-looking skins, but I always find they lack piquancy and eat somewhat flat. In flavour *Pitmaston Duchess* nearly approaches *Marie Louise* in some seasons, and in others it is inferior to it, much depending on climate. Here it is excellent, and is always exceedingly

juicy and keeps fairly well, for an autumn ripening kind. Originally sent out under the name of *Pitmaston Duchesse d'Angoulême*, it has of late years been more generally known as *Pitmaston Duchess*. It is a seedling from a cross effected between *Duchesse d'Angoulême* and *Glou Morceau*, and was raised by Mr. Williams, of *Pitmaston*, near Worcester.

Stoke Edith, Hereford.

A. WARD.

Melon Scarlet Premier.—Probably this excellent Melon is more commonly grown in the north than in the south, but wherever a really good free setting, luscious scarlet Melon is appreciated no mistake can be made in including *Scarlet Premier*. It was raised about the same time as *Best of All*, both originating, I believe, at *Hutton Hall*. *Premier* is a very hardy Melon, sets freely, the individual fruit being of medium size, oval in shape, and heavily netted. The flesh is deep, rich, and luscious, and it will keep in a cool fruit room longer than many sorts. I know its raiser took many first prizes for flavour in the scarlet-fleshed section for some years after its introduction. As previously noted, it is

grows into a shapely tree. There is no lack of suckers to sustain old Plum orchards or form new. These suckers also form good stocks for other Plums, such as *Golden Drop* and *Jefferson*, that cannot be relied on to come true from root suckers.—D. T. F.

Open-air Figs.—The finest open-air Figs ever grown by me were grown in a border of brickbats and mortar rubbish, a paved stable-yard, and a hard, sun-baked gravel walk. With such environments the Figs will need no protection, but will make short-jointed wood. Such well-grown, closely-compacted Fig growth will stand up bravely against all ordinary climatical dangers, and be ready to furnish and finish Figs in quantity and quality far superior to the majority grown under glass. Avoid excess of food, water, and shoots, and the Figs may almost be left with a rather free head to make the most and best of the sun and air around them. I agree with "Norwich" that no two better Figs can be named for open-air culture alike for quantity and quality than the *Brown Turkey* and the *Brunswick*. Under equal conditions the latter wins easily for size, but it loses no quality in the process. Nevertheless, I prefer the

Brown Turkey for the very practical reason that most Fig-eaters can consume a *Brown Turkey* Fig, whereas a *Brunswick* may need halving, and a luscious Fig divided into two or more portions to make it more manageable is already half-spoilt.—D. T. F.

Gooseberry Whitesmith.—After all that has been written about Gooseberries, is there any more prolific or richer-flavoured variety than *Whitesmith*? This old Gooseberry may still be found in many gardens where novelties are not allowed to oust old tried friends. I know of few fruits in the hardy fruit way more delicious than a dish of full-sized, well-ripened *Whitesmith* Gooseberry. It will grow and bear abundantly in any soil in which the Gooseberry is at home, and small trees speedily grow into large spreading bushes. Its habit of growth is



*The Pitmaston Pear on a south wall at Freefield Gardens, Inch, N.B.
From a photograph sent by Mr. Jas. Eddie.*

singular that green and white-fleshed varieties should be so much more numerous than scarlet. Yet, fortunately, most of the latter which exist are of capital all-round quality.—C. N. N.

The Early Violet Plum.—I noticed "Norwich's" appreciative remarks on this useful variety, p. 176. He is quite right as to my reference to its usefulness, and the fact that it could be had from the nurseries of Messrs. Wood and Ingram, Huntingdon, and probably from other growers in East Anglia and the midlands. It is, however, comparatively rarely catalogued or offered for sale in trade lists. The *Violet Plum* is one of the earliest and surest croppers we have, matching *Victoria* and *Rivers' Prolific*, and equalling or excelling all other Plums in the density of its bloom. Very few Plums are of higher quality for cooking in puddings or pies, while *Early Violet* makes an excellent jam. Neither when dead ripe is it bad eating. It is also one of our hardiest and easiest-grown and most regular-bearing Plums. The *Violet Plum* is best propagated from suckers. Of course, started on this principle, every well-rooted, carefully-planted, nicely-trained sucker

most convenient, as being somewhat upright the fruits are more easily picked than from such as *Warrington* and some other sorts. *Whitesmith* is not usually quoted in the list of market Gooseberries. Why is this? Were I planting trees for profit I should certainly include *Whitesmith*, and for private use, were I confined to two varieties, my choice would be *Whitesmith* and *Warrington*.—J. C. N.

Late Gooseberries.—I find, on perusal of Mr. Iggulden's article on Gooseberries, that he places the old *Red Warrington* in the very first rank. I quite agree with him, and also with his assertion that it is the longest keeper. On one estate where I was employed the school children's treat took place annually in September, and they were invariably treated to a liberal supply of *Warrington* Gooseberries. There were three rows of trees behind a north wall. The wall was furnished with *Morello* Cherries, and the combined crops were protected from birds by the same trellis-work and netting. I have known in a fine dry autumn some of the fruit to hang until it assumed a blackish hue, yet it retained its rich flavour. I am quite certain that if those possessing such a

site, and who sell their produce, were to prepare the ground well, so that the trees grew strongly and yielded normal sized fruit, they could—protection from birds being afforded—make such a plantation pay well, as so many people who scruple about eating, except in very limited quantities, ordinary soft autumn fruit, such as Plums, in a raw state eagerly seize upon Gooseberries if such present themselves. Mr. Iggulden's information respecting the dessert qualities of Whinham's Industry and Keepake will be useful to many, as I know there is an impression abroad that these are fit only for cooking. Whitesmith is mentioned, and I question whether, given good culture, any white Gooseberry has a richer flavour for eating in a raw state. Mr. Iggulden also speaks of the small rough red. This is probably identical with Ironmonger, an old favourite of mine, and one which grows into immense bushes, crops heavily, and is unsurpassed for preserving.—J. CRAWFORD.

Late Strawberries.—In his lengthy and most interesting article on late Strawberries at p. 198, "J. S. W.," I am pleased to see, speaks very favourably of that old, but now seldom seen, late variety Elton Pine. I know some have characterised it as a shy cropper and acid in flavour, but my experience of it is that when properly grown it is neither the one nor the other. Well do I remember the fine beds which grew behind a north wall in an Essex garden many years ago, the fruit ripening, as noted by "J. S. W.," over a long period. The best results were obtained from two-year-old plants, for the lateness of the runners rendered it impossible to secure large plants the first season, but two-year plants were covered with the brilliant firm fruit well into September, the cool, shady aspect of course having much to do with this. I have known some gardeners, and I think the practice a good one in the case of varieties which make runners late, to plant carefully in good soil in nursery beds in autumn instead of into their final quarters. The latter may get the benefit of exposure to wind and frost by being roughly turned up during winter, the plants being put out in March. I think the advice of "J. S. W." to plant doubly thick and remove every other plant at the end of the first season well worth following, especially where the fruits are grown for sale, although it is astonishing to what dimensions some robust varieties will attain even in a single season. There can be no doubt that this late Strawberry question is an important one both to the private gardener and to the market grower, and that where practicable a north aspect and cool, moist root-run are of great moment.—B. S. N.

GRAPE FOSTER'S SEEDLING.

"H." DOES well to call attention to the good all-round merits of Foster's Seedling. It is a general favourite with gardeners and likely to remain so, but it needs to be brought before the notice of amateurs as one of the most valuable varieties for that class of cultivators. If anything, Foster's is more free fruiting than the Black Hamburgh, as a healthy Vine will usually show several bunches on each lateral. Both in cropping and setting it is a long way ahead of Buckland's Sweetwater, which, although a handsome useful summer Grape, wants careful culture, is not so well adapted for early forcing and less suitable for amateurs generally. Foster's cannot be called an aromatic Grape, but the flavour is very sweet and refreshing when thoroughly ripened, and is a Grape which can be freely partaken of by anyone. Moreover, as "H." remarks, it hangs fairly well if a suitable atmosphere be maintained so as to avoid cracking. The last evil may, I think, to a very great extent be prevented by confining the roots in a well-drained inside border, mulching the surface with old Mushroom manure when on the point of ripening so as to prevent undue evaporation and airing carefully and constantly. Under these conditions I have seen Foster's hanging plump and sound late in the season, though in time the berries assume, as "H." says, a somewhat muddy appearance. Some gardeners

will remember the somewhat amusing incident which occurred at one of the South Kensington Grape shows perhaps fifteen years ago. In the class for Foster's Seedling, Mr. Allan, of Gunton, showed three exceptionally fine bunches. The berries were much rounder than the type and so very large, that the judges took them for some other sort and an equal first prize was awarded. Some thought them to be White Tokay, although the colour and general finish bore little or no resemblance. The matter was, I believe, afterwards cleared up by Mr. Barron having some grafts and proving the variety at Chiswick. The Vine at Gunton was grafted, but on what stock I now forget. This fact, together with good culture, accounted for the abnormally large berries. Foster's Seedling is a capital stock for many sorts of Grapes; in fact, most capricious sorts seem to thrive on it. Like "H.," I do not believe in tying back leaves so as to wholly expose white Grapes with a view to colouring them perfectly. I have several times practised it, but generally regretted it, as scalding ensued. A natural thin covering of foliage is, however, essential.

J. CRAWFORD.

BUDDING PEACHES AND NECTARINES.

I WAS much interested in the remarks on this subject by Mr. Parker and "W. S.," Wilts, as some years ago, being short of Peach house accommodation, I was induced, in order to increase the number of varieties and prolong the fruiting season, to make some experiments in budding some sorts of Peaches and Nectarines on to others. Having learned that Mr. McIndoe had found the plan very useful at Hutton Hall, I wrote and asked for a few buds of various Peaches and Nectarines, also a little advice on the subject. This request was readily granted, and some measure of success attended my operations. Mr. Parker's mention of Humboldt Nectarine reminds me that I inserted several buds of this fine variety on Lord Napier in a second early house, the result being that the season of supply from that tree was extended by at least a fortnight, Humboldt ripening about that time after Lord Napier was cleared, the fruits being individually large and superbly coloured. Humboldt is, I think, deserving of more general cultivation. It is a free-growing and cropping Nectarine when carefully grown, and although, in the opinion of some, hardly so rich in flavour as its relative—Pineapple—is still one of the best of the yellow-fleshed section. I budded Princess of Wales Peach on to Violette Hative with equally good results, the difference in the time of ripening of the two varieties also being about a fortnight. It is indeed curious, as "W. S." remarks, that the union of Early Grosse Mignonne with Alexandra Noblesse should result, as in his case, in the latter ripening in advance of Grosse Mignonne. I found, as Mr. Parker says, that it is not wise to select the grossest wood of the previous year as a stock, but the medium-sized, gumming being then less liable to ensue. Examining the ties at intervals is also important, as it is astonishing how quickly the bark swells on healthy trees. I quite agree with Mr. Parker that in small Peach houses the above system of securing successional varieties is preferable to crowding in too many trees.

J. C.

Raising young Vines.—While a few still hanker after extra-strong bottom-heat-produced Vines for planting in new borders, most gardeners now prefer those which, although much smaller, are of a firm and reliable character. So much is this the case, that comparatively few nurserymen now give bottom-heat, except for starting the Vines very early in the year. After becoming established, the pots are stood on a cool ash bottom, or half plunged in unheated material, to save labour in watering. A few days since I saw a healthy lot of young Vines raised this summer standing in a cool house in order to induce gradual ripening. They were in pots about 8 inches in diameter, but these, when

turned out and examined at planting time, will be found alive and very fibrous in character. They will all live, and growth will, all other conditions being equal, be rapid and satisfactory, strong canes being forthcoming by the end of next season, though now they are little thicker than writing quills. Not so with many of the gross bottom-heat canes, which have nothing to recommend them save their size, which is, after all, only a secondary consideration. I have known many of these planted and every care bestowed, but as soon as the stored-up sap was exhausted the Vines came to a standstill until new roots were formed; these, from the shoelace character of those which were alive in the border, came very slowly, and the Vines have only been half way up the roof when others of the character described above have been going down the back wall. It is not wise to start eyes intended for the production of Vines for planting so early in the year as many do. March is soon enough; then the growth is subjected to a maximum amount of sun-heat and air from the start, and hard, well-matured, though smaller, canes result, all the fibrous roots of which are preserved for reproduction the following spring.—NORFOLK.

SCARCITY OF PLUMS.

IT is several seasons since there was such a poor Plum crop in this neighbourhood. All varieties, however, are not alike: some are as freely fruited as could be wished, but generally speaking Plums are much below the average. The most freely fruited with me are Pond's Seedling, Grand Duke, Prince Englebert, and Diamond, the last being cordon-trained trees. Early Rivers, usually so free in setting, did not produce any fruit at all, and both Kirke's and Jefferson, which are represented by trees in different positions, are, or have been, very thin. Coe's Golden Drop, too, is very thin in crop. When this is the case it is very difficult to get many dishes free from blemish, wasps and bluebottle flies spoiling so many, despite the use of destroyers. I do not think six trees of the Green Gage produced as many fruit this year as one does in some seasons, and nets had to be used to save these few from the birds. The latter have been more persistent in their attacks on wall and other fruits this year than I have ever known them before, blackbirds in particular. These seem to have not the least energy to search for natural food once dry weather sets in and there is fruit of any kind within their reach. Despite the fact that there are extensive woods where natural food ought to be available, they migrate away to fruit gardens and orchards as soon as an effort on their part is needed to find food. Owners of gardens who preserve all and every kind of native bird have known by a lessened fruit supply what an amount of damage they are capable of doing, and nets are not always proof against them. Birds, such as thrushes, blackbirds, chaffinches, tomtits, bullfinches, jays, and house sparrows, are a terror to the gardener's life from one end of the year, to the other, and, unfortunately, they get no sympathy in very many instances from those who might lessen the difficulties in less stringent rules as to the protection of birds. I cannot see that blackbirds discriminate much between dessert and cooking Plums; any kind that happened to be ripening and was not covered with nets quickly disappeared. They were very partial to Pond's Seedling, and many fruits were spoiled before they were ripe. The rainfall here has been very slight, and the ground remains still in a very dry and hard state, notwithstanding the general rainfall which appears to have existed throughout England. Plum trees of all kinds flowered most abundantly and appeared to have set freely, but the frost and drought, each in turn, have been responsible for a small crop.

W. S.

Wilts.

Gathering Apples.—"Cornubian's" remarks (page 204) on the gathering of early Apples have appeared at a very opportune time, for, with a

light crop and the bright, warm weather we have lately experienced, these are in most cases fast approaching maturity, and when fully ripe none will keep many days, but by timely storing in a cool place their season may be considerably prolonged, and the risk of damage by birds, which this season are ravenous for fruit, entirely prevented. It is doubtful whether leaving winter and spring kinds upon the trees after they have attained full size is any advantage to their long keeping, apart from the risk that is incurred by having much of the fruit shaken off by storms. Last autumn was the most favourable for the ripening of hardy fruit that we had experienced here for several years, and, thinking to improve the colour and keeping qualities of many of the late Apples by leaving them on the trees as long as possible, several varieties remained out until November. These, though carefully gathered and stored, were not in a single instance any improvement upon those gathered a month in advance, and in some cases did not keep so well. With early gathering, cool storage is the main factor, and where a cellar or earth or brick-paved room is not available, the use of slates, as mentioned by "Cornubian," will be found of great assistance, and much superior to the wooden shelves or racks so generally used for fruit.—JAMES DAY, *Galloway House, Gurliestown, N.B.*

LATE STRAWBERRIES ON NORTH BORDERS.

THE spell of tropical weather experienced during the last two seasons just when Strawberries were colouring, and which had the effect of rushing late and so-called late varieties in on the heels of the ordinary season sorts, where all alike were grown on exposed quarters, ought to impress gardeners who require fruit for the table over as long a season as possible with the necessity of returning to the once more common practice of planting for late supplies on north borders. At one show this season in East Anglia I saw Royal Sovereign, Gunton Park, Waterloo, and the so-called Latest of All exhibited, and as Strawberries now-a-days are not judged by size only, it is needless to say that the later sorts, though very fine, stood no chance with mid-season sorts of The Queen type. Lengthening the season of supply by say ten days or a fortnight is a great accomplishment, yet is quite practicable by growing the right sorts and giving the aspect named. Of course, with these late kinds one has to some extent sacrifice flavour, although several sorts, including Loxford Hall Seedling, have size, colour, and flavour combined. With a few there is some difficulty in securing strong runners soon enough for the plants to gain sufficient size for free-fruited the first summer, but Loxford Hall, Waterloo, and Elton Pine are always at their best the second season, and the first-named in cool, shady quarters escapes the ravages of red spider, to which it is rather prone in warm soils and sunny positions.

Loxford Hall wants growing, but it pays for any extra trouble, though from the seldomness with which it is named in reports of fruit crops it has never been generally grown. The fruit is very firm and travels well. Waterloo, according to my experience, does not like full exposure to hot sun. I first discovered this when living in South Notts. I had two rows of plants, one being partly shaded by an adjoining bed of Asparagus. Some fruits on the fully exposed plants seemed to be too much hurried, did not swell to the normal size, nor was the colour so good as that of those on the shaded row. Helena Gloede used to be more generally grown than now, and is not to be despised either for size, appearance, or flavour. Eleanor or Oxonian is a favourite with a good

many, and quite deserving of culture where room can be spared for a number of late sorts. The grower of late Strawberries should have as many strings to his bow as space permits, this being the only way of making sure of a supply of fruit even in inclement seasons. One thing in their favour is their chance of escaping late frosts, which often cripple the bloom-trusses of midseason sorts in open positions. Strawberries on north borders have sometimes an indifferent larder provided, but this for such an important crop is certainly not good policy. Latest of All is a good flavoured Strawberry and not so late, I think, as some of the above-mentioned varieties.

NORWICH.

LOOSE VINE BORDERS.

I QUITE agree, as will most Grape growers, with the opinion expressed by "C. N." (p. 175) on loose *versus* solid Vine borders. The roots of Vines have a great tendency to ramble away freely from the stem, and loose soil certainly favours this, and particularly when the soil is rich. The quill-like roots which are the outcome of vigorous Vine growth extend considerably in one season when favoured with an open compost in which to ramify. Firmness of soil—and it does not matter much how this is brought about, whether it is by the garden roller, a heavy rammer, or simply trodden with the feet—checks to some extent the movement of these strong roots and encourages those of a fibrous nature. Not only is this so, but, as pointed out by "C. N.," the growth of the Vine is much more solid, and consequently more easily ripened and more fruitful. The force of Vine roots in penetrating hard substances is considerable, a 9-inch or even 14-inch wall in some instances not proving a resenting barrier to their progress when they are bent on getting outdoors. New borders made with freshly-cut turf need a deal of firming to allow of the decomposition of the grass and the settling down of the soil through this decay. Of course nothing is so convincing as actual comparison, but not every gardener gets the opportunity of carrying out such experiments as those mentioned on p. 175. The lesson is a useful one to those who may be in doubt, and should readily dispel any faltering that may arise between the advantages of firm over loose borders. A friend of mine a few years ago was most successful with Vines in narrow and shallow borders, and he not only insisted upon the firmness of the soil by treading, but by the use of brick, which, by the way, is an excellent rammer for small surfaces. Finer Hamburgs or Madresfield Court I have never seen, either in bunch, berry or colour, than were grown for a few years in these narrow yet solid borders. During the hottest part of the summer water was given daily, yet a cracked berry was rarely seen.

W. S.

Birds and the Apple and Pear crops.—Not content with the damage they have inflicted during the past few weeks on fruit crops, such as Strawberries, Cherries, and bush fruits in general, the birds are now attacking the early Apples and Pears. Blackbirds and thrushes are the principal culprits in the former case, and tomtits in the latter. I had a complaint several days ago from a person who grows a good many of the early kinds of cooking Apples, that the birds before mentioned were ruining all the best of his fruits, and that shooting seemed to have but little effect as a deterrent, as they recommenced their depredations as soon as ever matters became quiet again. I find on looking round that they have attacked the fruits of Ecklinville Seedling and Red Beitingheimer, on some trees in a rather quiet part of the garden here. The fruits are quite hollowed out and, of course, quite useless, and, what is more annoying, it is the largest and best of the fruits that they have spoilt. The tomtits have also begun to peck holes in the sides of fruits of the William's and Pitmaston Duchess Pears, and unless they can be prevented from

doing further mischief, they will soon ruin the whole of the early Pears. Bush trees can be netted over, but when it comes to standards, the only thing is to wait for the marauders and shoot a few of them, and hang them up among the branches. I never remember birds to have been so troublesome in any previous season as they have been in this one, and it is astonishing the number that have found their way under the nets to get at the Gooseberries and other fruits. What is really wanted is a severe winter to thin down their numbers, for the increase during the past few seasons has been enormous, the losses during the previous four winters, in consequence of mild weather prevailing more or less throughout, having been almost nil.—S. E. P.

PEAR CLAPP'S FAVOURITE.

HAVING had occasion last autumn to lift and transfer a cordon-trained tree of this variety from one part of the garden to another, I have kept the same under rather close observance all through the season, with the intention of ascertaining the amount of harm, if any, the tree sustained from the lifting. The lifting was performed with all due care, and the soil being so dry last autumn, a thorough watering was given at the time of planting. In the spring the tree blossomed well, and in due course set a good crop of fruit, which I quite expected would drop when the time came for them to swell off. Contrary to expectation, very few, if any, did so, and the result has been an excellent crop of large, well-developed, clear-skinned fruits. The only effect the lifting had was to hasten the maturation of the fruits, they being almost ready for use at the time of writing. I can attribute this early ripening to nothing else but the fact of the roots having been disturbed, as the tree faces just the same point of the compass that it did when in its former position; consequently it does not occupy a warmer site than it formerly did. As a rule Clapp's Favourite generally ripens after Williams' Bon Chrétien, and such will be the case this year with regard to the crop on a tall bush tree in the open garden. It is a large, excellent Pear, of American origin, and although it keeps but a short time, it is most useful for augmenting the dessert during September. In appearance it is more handsome than either Williams' Bon Chrétien or Souvenir du Congrès, as the side of the fruit exposed to the sun becomes beautifully coloured with a deep crimson flush, while the remainder assumes a golden yellow tint. The flesh is white, tender, juicy, and sugary, with a highly perfumed or rose-water flavour, but is not quite equal in this respect to the two varieties already quoted, which have a musky aroma. It is a Pear that will succeed equally as well on the Quince as on the Pear stock, and the Quince is to be preferred for cordon and small bush trees, as it makes rather strong growth on the Pear stock. For forming a wide-spreading bush tree, the Pear is undoubtedly the best stock to employ, and although it is quite possible that lifting may have to be performed the second season after planting, matters right themselves afterwards, as the lifting at once throws the trees into a bearing condition, and future trouble is thus averted.

A. W.

Apple Peasgood's Nonsuch.—I think that in certain localities various kinds of Apples and Pears have their on and off seasons, and where one kind is good one year it is not so the next. In no case have I seen such fine specimens of this Apple either for colour or size as I did last year, and I am rather doubtful if there will be as good a display of it anywhere this season. It is early to speak as yet, of course, but one can usually tell by now what they are going to do. The few fruits I have of it here are very poor compared to their last year's form, but I have never seen it so good anywhere in the eastern counties as it is grown in the west. At Shrewsbury it was in very poor form, but this, of course, is early, and perhaps by the time of the big show at the Crystal Palace there will be better specimens forthcoming. To

get the best results this fine kind should be grown on a wall, where with care the fruits colour up grandly, but, of course, they are very attractive to birds in such positions and should be early protected.—H. R.

Burnt refuse for Apples.—Whenever I have any of this material to spare I make it a rule to place it about the stations of Apples growing on the grass, and it is easy to see by the improvement in the colour of the foliage on the trees how far it has been used. In many cases I have noticed when it has been applied to the roots of old trees that the fruit has been less liable to crack and spot, thus showing that there is virtue in it for the fruit as well as the growth. After the potash and other constituents have been washed out of this material there still remains the roughness of the ash, which is a great help mechanically to the roots of all trees, in a heavy, close soil more especially. It is one of the best of many ways in which this useful material may be used.—H. R.

Firm soil for Vines.—I am in thorough accordance with "C. N." on this point, and I have frequently advised readers of THE GARDEN to firm the compost well when renewing old or making new borders. Indeed, I am afraid "C. N." skipped a bit of my note, for in it I said: "In borders of this kind the roots are soon running all through them, and being trodden and rammed very firmly when putting together, they will be of the best class for fruit production and the formation of sturdy, short-jointed wood." Still, this point cannot be too widely known, and "C. N.'s" instructive note may meet the eye of some who are not convinced of this important point, in which case it will not have been written in vain.—H. R.

Plum Denniston's Superb.—This Plum fully deserves all that "J. C." has to say in its favour on p. 174. It is not so largely cultivated as it should be for private use, and owners of orchards, whether they be farmers, amateur gardeners, or cottagers, would do well to grow it for home consumption, as it bears splendidly grown as a standard. For the kitchen it ranks almost, if not equal, with Green Gage. It is also a first-rate dessert Plum, and when allowed to hang until they commence to shrivel the fruits are then, as "J. C." truly remarks, very delicious for eating. Where space is restricted and standards would therefore not be admissible, very successful results may be obtained by growing this variety as a bush. It is then often necessary to lift at the end of the second year after planting to check strong growth, but once this is accomplished the trees bear freely enough afterwards if attention is bestowed on summer pinching. It is supposed to be a Plum of American origin; it has a hardy, vigorous constitution, and both grows and bears very freely in the majority of seasons.—A. W.

Strawberry St. Joseph.—At Highclere Castle Mr. Pope layers this variety in the summer into 3-inch pots, giving the plants a firm loam, then taking them away and standing on a cool ash floor, where they become well rooted, and at once throw up small trusses of bloom. As the flowers soon set well, the plants are taken into a cool house and stood on a shelf near the glass, where they fruit freely. It is by having a sufficient batch very possible to have a succession of fruiters for six weeks, and dishes of fruit thus obtained are most valuable during the shooting season. The plants after they have done fruiting can be planted outdoors to give stock to produce both fruit and runners the following season. The fruits have none of the roughness of the alpine, and if they do not possess the somewhat imaginary flavour of that section are larger, smoother, and much more pleasant eating. Of course, the outdoor plants fruit very well, and if mulched with long litter the fruits are clean. But in wet autumns or where insects are troublesome it is a great gain to have the plants in pots in the way described. Most certainly it is a novelty to find a variety that fruits so well and so precociously from summer runners as St. Joseph does. It is a

variety every gardener should have, and amateurs who like Strawberries will find that it is very easily grown.—A. D.

FLAVOUR IN STRAWBERRIES.

MR. ENGLEHEART'S paper relative to flavour in Strawberries is well worthy of the careful consideration of raisers. Size and travelling qualities are very much pushing flavour out of court. Still I do not consider size and flavour as necessarily antagonistic. I have grown British Queen of 3 ozs., and, without a doubt, that Strawberry stands on the tip-top apex of the present pyramid of perfection in flavour. It certainly is a curiously eccentric kind. For about five years it did admirably with me where I now live, then it took a sudden dislike to me, and I have never since been able to secure even a decent crop. I am surprised that Mr. Engleheart made no mention of Laxton's Latest of All, very nearly equal to British Queen in flavour, very large, and producing very heavy crops. Its two drawbacks are the white (sometimes green) tips, which it inherits from one of its parents, and it fails to last. It is one of those Strawberries which are improved by an annual treatment. If good runners can be got into their quarters by the first week in July they will always give a splendid crop the following season. After that (with me at all events) the plants dwindle and gaps are frequent. I wonder whether many of your readers recollect the old Carolina, a very pale coloured round Strawberry with an exceedingly high and most peculiar flavour—a flavour perfectly distinct from that of any other Strawberry of the period. It was always a wonder to me that this failed to save it from extinction. I was as much pleased as surprised to find this peculiar flavour resuscitated in the new French Strawberry Louis Gantier. This variety is (as far as this part of Ireland is concerned) perfectly worthless as an autumn bearer on its runners, but along with its fine flavour it bears perfectly astounding crops of (I must confess) ugly dirty white fruit. It never will be a market Strawberry, but a few lines should be grown in private gardens. Marshal McMahon is another very highly flavoured Strawberry. I have not got Mr. Engleheart's letter before me, but I think he fails to take any notice of it. Here again we have a resurrection. I am old enough to remember the old Myatt's Pine, probably the very best flavoured Strawberry that ever existed, but possessing a constitution of such extreme weakness that it soon disappeared. I recognise in M. McMahon a very decided trace of my lamented and long-lost friend. I should be glad if any of your readers could tell me whether Myatt's Pine was even its remote ancestor. One more neglected favourite I mention in conclusion, Myatt's Eleanor. I cultivated it successfully forty years ago, but have never been able to do so where I now reside. It was (and I suppose still is where it succeeds) a very late variety. I have often had it, and had it good, on September 1. I know no very late variety with so good a flavour, though I daresay the new St. Joseph may in a fairly good climate (which I have not) have an excellent though entirely different taste.

Co. Caran.

D. K.

NOTES AND QUESTIONS.—FRUIT.

Apple Washington.—There was a very fine dish of this handsome Apple on Mr. McIndoe's second prize fruit table at Shrewsbury, and though, of course, it is not yet in season these fruits were very handsome. I did not hear what position they had been grown in, but, judging by their appearance, they had been taken from indoor trees.—H.

Melon Gunton Scarlet.—At p. 115 "J. C." writes respecting the above variety. I have had several opportunities of noting its merits. With me Gunton Orange proved an excellent Melon, not large by any means, but always reliable as regards flavour, and this is the best test of a Melon. With Mr. Allan's new Melon growers will have little to find fault. I admire it for its size. It is quite right

a Melon should never be sent to table a second time after being cut, and to follow out this advice large fruits are not needed. In the Gunton varieties the fruits are just the size liked for private gardens, and the flavour is excellent and the fruits handsome.—G. W.

Pear Doyenne d'Alençon.—I was pleased to notice in the list of Pears adopted by the Congrès Pomologique of France the name of Doyenné d'Alençon. Only in one garden have I seen this variety, and that was at Hillside, Newark. The late Mr. Newton obtained it from a friend near Paris and fruited it as a horizontal cordon. A small tree bore a nice lot of fruit, which came into use in February and March. The garden at Hillside is very exposed and the soil a stiff clay loam. A good many late Pears require a warm climate and wall space to secure thorough maturity, so that a late variety which is at home in a midland or northern locality, and especially in cold, strong soils, is indeed valuable.—NORWICH.

GARDEN FLORA.

PLATE 1242.

THE NEW GIANT VIOLETS.

(WITH A COLOURED PLATE.*)

A VAST change has taken place during the last half dozen years in the modest Violet, and if this popular flower continues to improve in the near future as rapidly as it has done in the past, then its size and stateliness will become more apparent than its traditional, but fast disappearing, modesty. Few will be disposed to complain of the increased size provided the giant Violets do not come short in other respects, such as fragrance and free flowering. The addition of 3 inches or 4 inches to the length of stem and the expansion of every petal by more than half have added immensely to the value of Violets for cutting. Some maintain that the fragrance of California and Princess of Wales is not so pronounced as in the older varieties, and others think that the increased size is a drawback, but the latter especially is only a sentimental objection, for the majority acclaim the strides which the flower has made, and look for greater wonders in the future.

CALIFORNIA was about the first giant Violet to make its appearance, and in spite of a little incredulity at the outset was largely bought, and in many cases successfully grown. Having a rank habit of growth, in many cases it soon became crowded and tangled, and disappointment resulted; but where it has been judiciously cultivated it has generally produced abundance of immense blooms. It possesses the true violet colour and has a most graceful pose. It has been my best outdoor variety for three years.

PRINCESS OF WALES, which made its appearance about the same time as California, easily leads the way so far as size is concerned, but its colour is not so good, and it is more suitable for frame culture, as it is rather less hardy. It does well in pots and is a grand flower. The leaves are large and leathery. It is easily propagated, and lifts well in September for frame culture. I have frequently gathered blooms measuring close on 2 inches in width from plants in the open ground.

PRINCESS BEATRICE is rather smaller than the two first-named varieties, but the colour, which has more mauve in it, and the perfect shape of every bloom make it a very desirable addition. In

PRIMAVERA and ITALIA we have two continental varieties which rather resemble California, but they bloom over a somewhat longer season.

LA FRANCE is decidedly darker in colour than Princess of Wales, which is an advantage. It

* Drawn for THE GARDEN by H. G. Moon in Messrs. House's Coombe nurseries, Westbury-on-Trym. Lithographed and printed by J. L. Goffart.



has been claimed for this Violet that it is the largest up to date, and I think the claim will probably be upheld, and that it will also prove most prolific. The French varieties,

LUXONNE, L'INÉPUISABLE, and EXPLORATEUR DYBOWSKY, have not yet been sufficiently tested in this country to form a definite opinion as to their general utility, but they are robust in habit and have successfully resisted the red spider during the past exceptionally trying summer.

Apropos of the red spider, many Violet growers must be sadly disheartened by the ravages which it has already made, and a cheap and effectual insecticide which can be relied upon to dispose of it will be welcome.

Whilst the culture of Violets is not so difficult as many would suggest, they certainly call for care and patience right through their career from the cutting-bed to the rubbish-heap. Briefly, I root the cuttings in September either in frames or sheltered borders. If they make much growth before winter, I lift and line them out in nursery beds, taking care to plant sufficiently deep. A slight protection from the frosty winds of February and March is advisable, although in many localities nothing in this way will be required. Plant out from 12 inches to 15 inches apart in April or early in May and use cow manure as a dressing, especially in light soils. The trying months are July and August, and it is then that Violets will give out unless they can derive substantial assistance from beneath, and that in spite of overhead watering. The shade afforded by large fruit trees has been very beneficial, and some such position should be secured for planting in where quantities of Violets are indispensable. This is especially desirable where the clumps will be removed into frames in September.

Much has been written about the culture of Violets under glass, but one point calls for attention, viz., the necessity for plenty of light and air even during a severe winter. A little frost will not injure Violets half so much as the unreasonable nursing and coddling which they often get in frames. I am sure that this remark especially applies to the rank-growing giant Violets. Much water is also injurious. Pick off the decayed leaves and keep the soil fresh and sweet. When the plants have done flowering they may as well be thrown away, as it is presumed that plenty of cuttings will have been rooted from the runners which the plants have supplied during the previous August and September.

JAMES C. HOUSE.

Peat-moss litter as manure.—Various opinions have been offered from time to time as to the bad and good effects of this material as manure. Of late years there has been a growing tendency to use it in stables instead of straw, and consequently gardeners in many establishments have found themselves in the awkward position of having to use peat-moss litter manure or nothing. Compared to good straw litter manure, I do not consider it worthy of the name, and have come to this conclusion after using it on a somewhat retentive soil. In itself the manurial properties contained are very small. After lying in the ground for a whole season I have seen it turned up in exactly the same condition as when dug in. I can also substantiate the statements made by several correspondents on the ill effects of peat-moss when used as a mulch for Strawberries. It may answer fairly well if the weather happens to be dry during the fruiting period, but let it come wet, and wholesale rotting is almost sure to be the result. There may be some instances where peat-moss is apparently beneficial, but I fail to see how bog peat, in which nothing grows naturally to any perfection, can eventually prove to be of lasting benefit.—H. H.

THE WEEK'S WORK.

KITCHEN GARDEN.

PRICKING OUT CABBAGES.—After the required number of spring Cabbage plants has been planted on the various quarters from the second sowing, the more weakly that remain over may well be pricked out closely on very firm ground not over-rich. This is the safest plan, as one is never certain what the winter will be. If mild and much bolting occurs in the main plantations, the latter are often the more valuable of the two, and if severe weather should be the order of the day, the nursery plants can easily be protected with litter, Bracken or some such material; and should they survive, their constitutions are better than of those wintered in frames or pits and the plants go away better when transplanted in March or April. If not required, the labour is not much, and it is gratifying to know one is on the safe side. Cauliflowers may be treated similarly, so that dry leaves or evergreen branches may be used for protection. I have had such varieties as Snowball and Erfurt, also Early London, stand through a moderate winter planted at the foot of south and west walls like Lettuce. In districts where early Cabbages occupy hot, dry sites the present is a trying time for first early spring Cabbages, as the amount of rain that has fallen has made some, but not sufficient impression on the root-run. Where flagging has been excessive, owing to an arid atmosphere or violent winds, evening sprinklings overhead by means of rosed watering-pots are beneficial, enabling the plants to assert themselves by morning. The same remarks apply to Endive. Batches of the latter, owing to lifting time approaching, must, where growth is not vigorous enough, be assisted with liquid manure.

MUSHROOM HOUSE.—In a former calendar I gave instructions concerning the preparation of an early bed, which will by this time have been spawned and soiled over. Hitherto, the temperature has been sufficiently high without the aid of artificial heat, but with colder nights a gentle warmth in the pipes may be allowed, 55° being a suitable figure to aim at. Later on, when it is discovered that the spawn is actively operating, a fall to 50° or 52° will be advisable, as suiting secondary and main-crop beds best. In the event of the heat of the earliest bed falling lower than is desirable, give a liberal covering of dry litter. I prefer oat-straw, as this lies loosely on the bed and does not become mouldy like hay. Provided the material is fairly moist, do not apply water to the surface until the young Mushrooms appear. For making successional beds, manure from corned horses should be collected every morning, for, as a rule, by the time sufficient has been collected and gently sweated it is time to make up another bed. Much carelessness is often displayed in the preparation of the droppings. Some allow them to be thrown into and remain in a heap for days together in order to save time, but the practice is a bad one, as by such violent sweating when the material is in a moist condition much of the ammonia required for producing and sustaining the crop is lost in evaporation, neither do such beds last so long. Throwing it into a ridge and turning it every morning is by far the best plan. The long straw should be removed as the material is collected, the short being left in to assist in keeping it open and thus encourage a free working of the spawn. Saturating the walls and floors of Mushroom houses every morning with water is not good practice, as it creates a close, steamy atmosphere, which soon turns the tiny Mushrooms black and prevents them swelling. The best way is to slightly syringe the paths and walls each morning, and no more. Insert the spawn when the heat of the bed has fallen to 90°. Some spawn nearer 80°, but sometimes the disturbance of the surface and opening and shutting of doors cause a sudden drop of 5° or even 10°.

PICKLING CABBAGES.—Most gardeners like to secure large, heavy specimens of red Cabbages, but these extra large heads are not at all times the most profitable. Not infrequently when the

plants are raised say with the earliest lot of ordinary spring cooking Cabbage they grow vigorously if the winter is mild, and the succeeding spring favourable, monstrous Cabbages are formed by early autumn, and as they are not usually required for pickling until well into November, bursting and decay take place. Of course they can be pulled up and suspended by the stem in a cool, dry outhouse. I have grown excellent solid heads from plants raised in a frame in spring. At any rate, too early autumn sowing is not advisable.

GENERAL WORK.—After a very dry summer we often get a succession of heavy rains in autumn; therefore the sooner a good-sized heap of soil is got in readiness for use in forcing early batches of pot and box-grown French Beans the better. It can then be stored away in some convenient corner where it will not become too dry, and can be covered with boards or thatched to protect from drenching rains. A good friable loam, with a small percentage of horse droppings or a little artificial manure, should be added to the soil. Those who force in shallow wooden boxes—a system which has much to recommend it, especially in mild winters—should take advantage of wet days for the repairing of the same, or making new ones if required. Everything will then be in readiness for a start in October. Those who are venturing on Bean forcing for the first time and are unacquainted with the best varieties will find Osborne's, Sutton's Dwarf Forcing, and Syon House reliable. J. C.

FRUITS UNDER GLASS.

FIGS.—No other fruit tree grown is so prolific as the Fig, and there seems to be practically no limit to its continuous cropping while growing conditions can be maintained. It is advisable now to prevent any further development of fruit or growth on trees intended to be forced early next year. Late or third-crop fruits are never so fine as the earlier ones, and they may well be sacrificed with a view to building up the trees for next year. With me the wood is apparently ripening up well and little fire-heat is being used; free ventilation night and day and a drier condition of the soil will do all that is necessary in order to finish up the growth in a satisfactory way. Where bug has established itself, the leaves, as they turn yellow, should be picked off by hand and carried away to the fire heap instead of being allowed to drop on to the borders. If the stems are left to drop of themselves no harm will be done by taking away the leafy portion, and at the same time removing all fruit that has formed. If replanting is contemplated, no time could be better than the present, and in the case of trees that have been making gross and unfruitful wood, I would suggest, as the very best possible remedy, that the borders be opened up, removing the rich soil and substituting a very much poorer rooting medium, but one that contains lime and broken brick in large quantities, giving plenty of drainage and ramming the soil as firmly as possible. The Fig is not a delicate tree, and it does not object to an amount of root-disturbance that one would not like to employ with many other trees, so no fear need be felt that the loss of a few roots will do the trees any harm, and in many cases it would be a great benefit to cut them away freely and to curtail the borders considerably at the same time, so that the new roots shall be confined to a very limited space and fully occupy that space before any additions to the border are made. By proceeding in this way the trees will be induced to make wood of the right sort for fruiting, and the fear of the first crop turning yellow and dropping when half grown will disappear.

PEACHES.—Early-forced trees will now have cast most of their leaves and may be pruned at once, first of all loosening them from the trellis and getting rid of all old ties. Whatever system of pruning may be used, the operator should bear in mind that the general tendency is to leave far too much wood in the trees. Probably this may arise generally from an anxiety to secure a good set, but there is always far more need to fear bud-dropping from trees that have been

thickly trained than there is with those which have been allowed ample room for the full development of their leaves. Personally I adopt the extension system of pruning and training and cut away all spurs that form, retaining only as much new wood as will clothe the trellis at about 5 inches apart. These shoots I rarely shorten, except, perhaps, a few of those which have encroached beyond their limits, and which must be curtailed owing to want of room to extend them. In shortening such shoots it is necessary to be able to recognise the wood-buds and to prune always to one of these, as, unless there is a wood-bud at the end of the shoot, it will die back. The old axiom that the centre bud of three on the same cluster is sure to be a wood-bud is a mistake, and holds good only in some cases, as many Peach trees carry young shoots with very few wood-buds, and bunches of three flower-buds are by no means rare on these; consequently the man entrusted with pruning should be able to recognise wood-buds at a glance. This is not difficult, as they are quite different in shape from the flower-buds, being long, thin, and pointed instead of being plump and round. Where the trees have had due attention paid to them in the matter of disbudding during the growing season pruning is an easy matter, as there will be but little to cut away except the wood that has borne fruit, leaving to replace it the young shoot that has been retained at the base of each piece of fruiting wood. If more than sufficient wood to furnish the tree has been laid in, it is advisable, for the sake of retaining the trees in good shape, to cut away the new shoots that have been laid in on the under-sides of the older wood and retain those laid in on the upper sides. When pruning is finished, the roof, glass, wood-work, and walls should be syringed and washed down with hot water and soft soap, using considerable force in syringing, so that the water may be forced into the crevices and drive out insects that may already have secreted themselves. Whitewash the walls with hot lime, and then turn attention to the trees, which should have the older wood thoroughly gone over with a solution of Gishurst compound, applied in accordance with the directions, and well worked into all cracked bark and other crevices. The young wood may be gone over with a weaker solution, but it is very susceptible to injury from strong insecticides of a solvent nature, and as the smoother bark on this wood offers no hiding-places, there is not the necessity to be so particular with it. The next process should be to remove the top 2 inches of soil from the borders, not forgetting those portions situated under the pipes and other places not easy of access, for these places are apt to be passed over unless their clearance is insisted upon, and neglect of these odd corners means undoing all one's good work by leaving a stock of insect life behind. It may be objected to this stripping the face of the borders that it exposes and injures fibrous roots near the surface, but the injury caused is more than counter-balanced by the good done in replacing the soil removed with fresh material. It is not yet too late to plant trees in an early house; indeed, those grown and prepared out of doors will now be in the best condition for planting, and if they are carefully dealt with they will carry a moderate crop the first year.

MELONS—From now onward it is not advisable to use the syringe on the plants in whatever stage they may be. Atmospheric moisture must be kept up in houses carrying fruits still in the swelling stages, but this may be done by keeping the evaporating pans filled with manure water and by frequent damping down of walls and other surfaces; this will be sufficient to keep down spider. Over-ventilation should be carefully guarded against and fire-heat kept on night and day, so that the temperature shall be kept fairly high and steady with only the usual fall at night. A few hours of a low temperature will probably spoil the crop. Whatever water may be needed by the plants should be given in the morning, and the soil near the collars should be kept dry

without fail, for at this late date canker may be readily set up by wetting the stems, and it is not so easily checked now as it may be in the summer. To assist the fire-heat and to prevent cold winds from blowing in on to the plants through the laps of the glass, the pits or houses should be covered with frigi domo or mats, the former for preference if it can be put on in a dry condition each night.

CORNUBIAN.

KITCHEN GARDEN.

SOILS FOR POTATOES.

MANY who grow Potatoes never trouble about any special preparation of the soil for them, and it is not at all unusual to grow them on a dirty fallow where the necessary hoeing and cleaning will kill some troublesome weed or another that has established itself. This is, of course, wrong, and is at the bottom of a lot of our Potato troubles. Time after time during the present season I have received samples of Potatoes from growers in different localities with the request that I should tell them what was wrong with them. In nine cases out of ten poverty and unsuitability of soil have been evidently the cause, for the tubers have been exceedingly small for the kinds sent—so small in some cases as to be quite unrecognisable—and bear that stunted look that shows plainly the want of suitable plant food in the soil. Fresh farmyard manure planted with the sets cannot really be of great service to the crop, and owing to the soil having lain close and inert all the season there are injurious acids formed that damage the tender skin of the growing tuber. Nature trying to remedy this fault, the flesh of the Potato grows out at that point, making either a very ugly-shaped or a scabby tuber.

One of the greatest aids to successful culture of Potatoes is preparing the land as far as possible in autumn. Whatever crop they follow should be off the ground by September, and as soon as the ground is sufficiently softened on heavy lands or directly the crop is cleared from lighter ones, let it be as deeply ploughed as possible or well dug as the case may be. If farmyard manure is to be used, it should be spread thinly and regularly before digging, and the soil left as rough as possible. But there are other materials that may often be got that are more suitable for Potatoes, and a heap of well-prepared compost applied either now or in spring is a valuable aid. The cleanings of ponds and ditches, odds and ends of soil, verge clippings, and coal ashes with a good sprinkling of lime when it is being turned, are only a few of the materials that a careful gardener may gather on most estates, these helping out the often very short allowance of manure and suiting this important crop exactly. About burnt earth and charred garden refuse it is hardly necessary to say much. This material is so well known as a valuable aid to Potato culture that little of it is likely to be wasted. This may, however, be kept dry and off the land until the final preparations for planting are in progress, as it is quick-acting in a chemical way when rains follow planting, and is also useful for placing along the drills and furrows, the tubers always turning out very clean afterwards. But even the fact of exposing the land to frost and rains in winter is a great help. It purifies and cleanses it, besides making it work very much better in spring, and it is always a sign of very bad management when you see a farmer ploughing old land, or a cottager or gardener digging it and planting at the same time. The effect of such dilatory work is worse in a dry season

than a wet one, especially on heavy lands where the ground turns up lumpy and dries hard, and one has to wait for rain before hoeing or moulding up can be done. The Potato is a long-suffering plant, and takes care of itself in a most remarkable manner against very long odds, but no one who will give it proper cultivation on practical lines is likely to lose by the experiment.

H. R.

Lettuce White Chavigny.—Many notes have appeared recently on Lettuces, but I have seen no mention made of this Cabbage variety. Doubtless most growers will agree that any kind that will give good tender heads in a season like this should be known. I consider this the very best for a summer kind for coming in in hot, dry weather. I have grown it the last three seasons and prefer it to any other kind. My plan is to sow it on Celery ridges through the early part of the summer, allowing the plants to remain where sown. In this position they receive good supplies of water and manure water occasionally. When treated thus it grows wonderfully quick and is very tender. I grew Continuity many years ago when first put on the market, and although praised by some growers, I consider it poor beside this kind. I am convinced Chavigny will remain as long before running to seed; added to this, it is devoid of that dark colour which is against Continuity.—DORSET.

A good insecticide.—In a recent issue of THE GARDEN "A. D." refers to my using a solution for spraying Peas affected with thrips, and also to my showing the haulm and Peas at the Drill Hall, stating he knows nothing of it, but suggesting it should be tried at Chiswick. I consider this a capital idea and hope it will be carried out. I used this insecticide (the name is Improved Spimo, not Spioæ, as written in THE GARDEN) on three long rows of Peas with the best results. Had I not used Improved Spimo I should have lost all my late Peas early in July from thrips. One evening I resolved to try this, having just obtained a gallon. Accordingly I had these rows, which were Ne Plus Ultra, Chelsonian and Walker's Perpetual, sprayed over with a weak solution, just warm. Although the tops and young leaves were curled in and eaten badly, in four or five days it was clear it had a good effect. A second application was given. This arrested the pest, and green leaves with elongation of shoots were visible. I then resolved to water and mulch the roots, with the result stated by "A. D." at page 196. Undoubtedly this is a splendid insecticide. Another advantage is that that being cheap it is within the reach of all.—J. CROOK, *Forde Abbey*.

The vagaries of Kales.—I shall be glad if anyone who, like myself, has experienced the difficulty, or rather the impossibility, of doing any good with some of the types of Kales will offer a suggestion as to the probable cause of failure. I grew Asparagus Kale successfully for several seasons until it went off in the mysterious manner chronicled last year in THE GARDEN pages, and as this was repeated for three years it was expunged from the list. This year the opportunity offered of trying many varieties of Kales, and two forms of Asparagus with Labrador were included. Two rows of each, half a dozen in all, were planted in the centre of the plot, and at the present time (September 16) there is not a plant left of the two hundred that were put out. On either side of them the dwarf curled types, both green and purple, Reid's Hearting, Scotch Kale, Cottager's and many different forms of garnishing Kale, are in the best of health, have completely covered the ground, and will make some splendid stuff. So far as the root is concerned, there is absolutely nothing the matter with the Kales that have collapsed. It is simply an above-ground question, as the foliage in the best of health to day droops to-morrow, then withers and finally dries up, the last being accompanied by the rotting of the stem. I have entered somewhat fully into the particulars of the disease with the view

to ascertain if other growers are in a similar plight, also to solicit notes from any contributors who may possibly have found the cause of the disease and, it may be, a remedy for the same. Failing to obtain the latter, I shall avoid all Kales of this type and rely solely on the green and purple curled and Cottager's.—E. BURELL.

POTATOES IN THE SOUTH.

ANYONE who has travelled from the southern to the northern counties will have noticed the different aspects that exist owing largely to the amount of rainfall. The season everywhere has been dry and south of the Thames excessively so, and this no doubt has been the cause of the early harvesting of most crops. For weeks past it would have been almost impossible to find a green field in Kent, and before August was out the majority of the corn was safely harvested. Potatoes, too, have come along at the same rapid rate, and in many gardens the lifting of the main crop was effected during the opening days of September. The same may be said of Onions, and with me the crop has been harvested several weeks ago. From observations made in different localities all of which have suffered severely from drought, I am of a stronger opinion than heretofore that Potatoes do not necessarily suffer to any great extent in a dry season, supposing, of course, that they have been subjected to fair and reasonable cultivation.

The early varieties were perhaps a little disappointing, not on account of the quantity so much as the smallness of the tubers, and this I attribute to the rapidity with which the tops ripened. In digging Potatoes this season we have had a good illustration of the value of autumn or winter manuring for this crop in preference to applying it in the spring, as in cases where the latter was done the manure, except being more hard and dry, came out much the same as when put in. Neither have I been able to see much difference in the results obtained from farmyard manure and artificials, as in the case of a piece of ground treated with kainit and superphosphate the crop was as heavy as where farmyard manure was used, and the application in both instances was made some time prior to planting.

In referring to varieties one approaches a wide subject, for their name is legion, and everyone knows how widely they vary according to locality. In spite of this, however, there are so many varieties of Potatoes in cultivation, and more are annually being added, that one would naturally expect that classification of Potatoes would be in a state of perfect chaos. But such is not the case, and it appears to be explained from the fact that out of the great number of varieties of Potatoes on the market only a very few possess really good all-round qualities, and, by the law of the survival of the fittest, these are well known and widely grown in most localities, while a great many sorts of inferior quality are only grown long enough to prove them, and then they sink into obscurity. Amongst early Potatoes, Improved Ashleaf, Sharpe's Victor, Early Puritan, and Harbinger, the sorts on which I depend and all well known, came out well except for the smallness of tuber, to which I have already referred. With stronger-growing main-crop sorts it does not need the eye of an expert to tell to a little from the appearance of the haulm how the crop is going to turn out, and though a good deal is urged against vigorous-growing Potatoes, it is quite impossible to get good tubers without healthy tops, and my heaviest crops have this season been lifted from rows where the haulm was the most vigorous. Over and over again I have had opportunities for observing patches of Potatoes where here and there could be seen a plant ripening off before the rest, and almost without exception these roots gave the lightest crop of tubers. Second growth is very prevalent this year, and in all cases where the haulm retains an exceptionally healthy appearance it is advisable to lift the crop, and it is almost certain that second growth will be found as the cause of it.

Disease showed itself a little both on the early and late crops, but with one or two exceptions no trace of it was found when lifting the tubers.

Taken all round, the yield of main-crop sorts has been as good as need be, and I append a few remarks on some of the varieties lifted. For the second successive season I have grown Snowball, and I am more than satisfied with it. Though one of the most robust kinds I had, the crop turned out to be a very heavy one, and the tubers, which are of an even, white, round character, are of excellent flavour. I do not hesitate to recommend Snowball as a high-class variety for main crop. Though strictly speaking a second early sort, I should like to say a word in favour of Pride of Tenbridge, a comparatively new variety, and one that will be sure to work its way to the front. Grown side by side with the popular Snowdrop, I am so favourably impressed with it as to give it preference to the latter sort. From several years' experience I am doubtful whether any better white round Potato exists than Universal. This variety, which has already been favourably mentioned in these columns, is somewhat rough in the skin, perfectly round, free from deep eyes, and of very superior flavour. Since growing it I have never come across a diseased tuber, and even late in the spring it boils with that white, floury appearance which characterises a good Potato. The much-vaunted Up-to-date has toned down somewhat this season, the tubers not being nearly so large as heretofore. The crop is fairly heavy, and though from my soil the flavour is fairly good, I have tasted tubers from other mediums of a very watery character, and have come to the conclusion that the quality of Up-to-date is best when grown in a fairly dry aspect. I have a good word to say for Crawley Prizetaker, which has a wide reputation as a white pebble-shaped variety. The first consideration in choosing a Potato is quality. Unfortunately, this is by no means a general rule, nor will it be, I am afraid, so long as there are sorts which have only appearance to recommend them, and in view of the fact that at present there is no other mode in vogue of judging Potatoes at shows except by appearance.

G. H. H.

Beets.—It is interesting to find how good Beets are this season in spite of the drought. It will be a good thing if scarcity in other directions should lead to a greater consumption of these roots than has hitherto been the case, for we have none more wholesome or nutritious. But I have specially noted that the Turnip-rooted variety has done on very dry soils even better than has the tap-rooted varieties. That has been specially my own experience in a trial of a dozen varieties, where the Crimson Globe, the best stock of the Turnip-rooted forms in cultivation, has made capital bulbs of rich colour and delicious quality. But there is ample time for tap-rooted Beets in dry soils to grow yet. As to the best out of the eleven others, I find it very difficult to say where all are so good. None of the varieties selected are coarse, all being apparently equally good for garden culture.—A. D.

Leeks.—It is needful to see Leeks grow strongly, as the various vegetable exhibitors do to enable distinctions to be determined. These are less seen in the stems when exhibited, as all being blanched white as high as possible, the chief distinction is found in length and comparative narrowness of stem or in shortness and thickness of stem. Still, these conditions will often result from diverse methods of culture with the same variety. But, as seen recently in two gardens, marked differences of top were noted in Prize-taker, Sutton's Selected, and Dobbie's Exhibition. The first has broad flag-like leaves closely set on the ground. With such, stems may be stout, but cannot be very long. The second has tall glaucous foliage, quite distinct, and in the best forms set with remarkable precision. Some of the plants have habits that lead to the impression they will have long blanched stems. The last has similar erect leafage, but it is quite

green. It is so far satisfactory to find that so much distinctness really exists in these varieties.—A. D.

Climbing Beans.—How well these Beans repay generous culture is evidenced in good gardens. At Hackwood Park, Highclere Castle, Forde Abbey, and other gardens recently visited I found what seemed to be remarkable rows of the best scarlet and white runners, but scarlet chiefly, of great height and luxuriance and fruiting abundantly. At Hackwood the growths were 12 feet in height, carrying splendid crops. Such varieties as Ne Plus Ultra, Best of All, Hill's Prize, and others of the new long-podded section are wonderful croppers, and it is folly for anyone to assume that these are less productive than are the old stocks of runners. Really they are far more prolific. It is doubtful whether, allowing 5 feet space across a garden quarter for a tall row of runners, any other crop could give such profitable products as one of these rows does. But, apart from variety, which is of some importance, this fine product is a question of culture. Trenches are opened 2 feet wide, and the ground broken up and liberally manured fully 30 inches deep. The seeds are also planted thinly, from 9 inches to 12 inches apart, and the result is seen later in remarkable growth and productiveness, the crop being at the end of the season measured by many bushels. Shopkeepers, unfortunately, never get such Beans as are thus produced. The average town runner Bean this season has been hard, dry, stringy, seedy, and a tasteless product. No matter what the vegetable, this season deep cultivation and liberal manuring have been abundantly rewarded.—A. D.

PEAS AND DROUGHT.

THOSE who have had an ample supply of green Peas during the whole of the summer must be regarded as fortunate. In the south of England I never had a more trying season. Although the dry days were fewer than was the case in Jubilee year, the drought was more serious. The continuous easterly winds, accompanied by the fierce heat, quickly dissipated any land moisture there might be within 1 foot of the surface. For years I have trusted to a variety that does not appear to be much known out of the county of Devon—one named Goldfinder. It is best described as an improved Ne Plus Ultra, or perhaps it would be more fitting to say an enlarged form of that sterling variety. Goldfinder will grow and crop heavily early and late, and I never yet saw it attacked by mildew. It has one fault, perhaps, although I do not regard it as such—viz., it grows 8 feet high in some seasons. I prefer tall-growing Peas, as better crops are obtained than from dwarf sorts, and what I regard as the main point about Peas—flavour—is not lacking in many tall-growing sorts, certainly not in Goldfinder. Eight large green Peas are found in nearly every pod, sometimes more. The pods, too, are numerous, which is a very important item. A larger share of success is obtained if thin sowing is practised. How can we expect Pea haulm to grow strong and keep clear of any fungus, like mildew, if sufficient space for development of stem and leaf is not afforded? This is a far too common error. Too many persons when sowing Peas seem to be afraid they will not get rid of the seed fast enough.

The plan of digging a trench and filling it with manure for the roots to grow in I strongly object to. Peas growing in such a preparation more easily succumb to drought if they are not regularly and copiously watered. In such a preparation the roots all too soon ramble to the extent of trench, and the wall-like sides of the trench too often act as a root deterrent. When the land is deeply trenched and sufficiently manured in the autumn, well broken up and

pulverised in the spring, choosing dry weather if the soil be at all heavy and retentive of moisture, a thorough and correct preparation is then obtained. All that is afterwards necessary then is to draw out a wide drill and sow the seed thinly, earth up the plants when 4 inches of growth have been made, and mulch 1 foot wide on either side of the row with half-rotted farmyard manure. It is useless to wait until the bulk of the moisture has evaporated from the soil before applying a mulching of some description. Seldom indeed does early mulching do harm. I never yet heard of Peas being too wet at the roots in the month of June, July, or August. Some persons blame too much wet for mildew attacks, but I think the reverse is more often the cause.

E. MOLYNEUX.

Vegetable Marrows.—I must confess surprise that your correspondent "H." (p. 196) should fail to understand why Vegetable Marrows are thought so much of at cottagers' shows. I think there can be only one explanation, and that is the extreme usefulness of the vegetable from a cottager's point of view. My experience of the average cottager is that he does not grow any particular crop because its cultivation happens to be interesting, but rather for the food supply of his household, and with no other vegetable does he get a better return for so small an outlay. The dry season of 1899 has been an illustration of it. Many cottagers have not been able to gather enough Peas to pay for the sticks, and Beans of all sorts have not come up to the mark, and yet in the rubbish corner of the garden the Marrow plant has grown apace, and is still providing a supply for the table. Nor does the supply end when frost closes the career of the plants, for most cottagers are in the habit of storing a few of the best Marrows for use in the winter when other vegetables are scarce, and though they are not then so good, they are by no means to be discarded.—G. H. H.

STOVE AND GREENHOUSE.

PORTLANDIA GRANDIFLORA.

THIS, of which I send a photograph, is a very beautiful rubiaceous shrub from the West Indies. It is, I believe, rare in collections of stove plants, and is said to be difficult to flower. The plant in question, however, had three flowers on it last April, and in July, when it was photographed, thirteen blooms were fully out. The flowers are sweet-scented, creamy white, and very beautiful with their waved or almost crinkled edges. It is in a 9-inch pot, and was placed in the open in full sunshine for three weeks in August, 1898. It was afterwards kept rather dry during the autumn, and was fed with artificial manure occasionally in the spring and early summer. It has been grown in a moderately warm stove and rather crowded up with other stove plants. Like most other Rubiaceæ, it is easily grown from cuttings.

Sispara, West Hill.

R. H. B.

Crinum roseum.—This is a noble plant when well grown into a large specimen, and when it flowers it is sure to attract a lot of attention. A plant now in bloom has upwards of a dozen of its large spikes, each with a magnificent flower-umbel open, and the effect is very good. It is one of the easiest of all plants to grow, all that is necessary being a greenhouse temperature with ample light and plenty of water at the roots.—H.

Begonia Gloire de Lorraine.—At Shipley Hall, Derby, there is a fine stock of this useful winter-flowering Begonia, a splendid plant for decoration of all kinds, lasting well for many

months and standing better than most things in a cool or dry sitting- or living-room. Of course, such treatment as the latter is not to its taste, for to do it well it must have a moist though not overheated house, where thrips, its worst insect enemy, is kept at bay. Many people have given this plant a bad name by starving it and getting it into flower in summer instead of getting a good growth into it and pinching off any flower-buds that form before October. It is a capital subject for keeping up a display after the bulk of the Chrysanthemums are past.

Plumbago capensis.—This is certainly one of the most beautiful of greenhouse climbers, and there is nothing to beat it in its colour. The long shoots produced in spring are at this time of year wreathed with blossoms, and, good as it is in a small structure, it is simply unique among all climbers for a large structure where it can be allowed to take its own way entirely and hang in long festoons or ramble about at will over pillars or supports of the roof. Then its true beauty is seen. The culture is very simple, all that is necessary being to see that free drainage is



Portlandia grandiflora. From a photograph sent by Col. Beddome, Sispara, West Hill, Putney.

secured and a not over-rich border given." When grown in pots it looks much prettier if allowed freedom than when tied in to circular or other trellises. A shoot pushing out here and there loosely and naturally is a great offence to the eye of some gardeners, but the plants are really much prettier so, and if lightly cut in every year, no more training or pruning of any kind is needed. The compost for pots should be rather rich when the plants are strong and healthy, and feeding from the surface will also be necessary when the pots are full of roots. Syringe the growth regularly to keep red spider in check.

Aristolochia gigas.—Where there is room to train a plant of this singular and very large-flowering plant it ought to be grown as a curiosity, for most employers like to have something of the kind to show to visitors. The blossoms are of immense size, the colour varying a good deal, and from the shape of these when opening they have been called the Goose Flower, not inaptly, as the

tube is bent and not unlike the neck of this bird. This class of plant requires a fairly large house or a long length of rafter, as it seldom flowers freely in a young state. The compost may be good, but not over-rich, as too rapid growth will be at the expense of flowering, the blossoms dropping from the leaf axils when small. For beauty it cannot compare with *A. elegans*, a very richly-marked and free-flowering kind with smaller flowers. I have had a yard or more of roof covered with this latter kind quite a mass of the deeply-tinted and prettily marbled flowers, but the larger kind named above flowers less freely, though more continuously. I saw a nice plant of it flowering freely at Shipley Hall, Derby, a few weeks ago, where it was growing in a corridor-like house in an intermediate temperature.—H. R.

Witsenia corymbosa.—This South African Irid, once popular, but now very rarely seen, is at the present time in full flower, and pretty it is, the blue blossoms being distinct from those of any other occupants of the greenhouse. It forms an erect stem of a firm, woody texture, while the sword-shaped leaves arranged in a fan-like manner are collected at the ends of the branches. Of the pretty blue flowers a succession is kept up for some time. The reasons that cause the merits of this *Witsenia* to be overlooked now-a-days are doubtless its slow growth, somewhat exacting cultural requirements, and the difficulty attending its propagation, for cuttings do not readily strike root. They succeed best taken off with a portion of the woody stem, inserted into well-drained pots of very sandy peat, and covered with a bell-glass till rooted. They require very little artificial heat at first, though after a time a slight additional warmth will assist their rooting. The soil best suited for this *Witsenia* in all stages of growth is a good fibrous peat with a liberal admixture of sand. The pots prepared for the reception of the plants must be well drained, and the general treatment should be much the same as that given to Cape Heaths.—T.

EUCHARIS AMAZONICA.

I CONSIDER the flowers of this plant to be the most chaste and beautiful of all species that I am acquainted with, but it is so often used by florists and others in ways that are quite unsuited to it that it has come to be looked upon as a rather common white flower, useful, of course, but much in the same way that *Narcissi* and other popular flowers are used, i.e., for filling up, and such things as *Lily of the Valley*, *Roman Hyacinths* and others are placed or wired over it. This, our florists say, gives a light effect, but it shows very bad taste on the part of any floral decorator to use such a lovely flower as the *Eucharis* for a groundwork, as it were, and make other flowers spring out of it in an unnatural way.

The *Eucharis* is essentially a restful flower; it is a pity to cut it at all if it can possibly be avoided, for it never looks so well as against the deep green of its own beautiful foliage, the contour of each pure white blossom shown up by this and the light and graceful pose on the spikes not being excelled by anything in the whole range of flowering plants. But, unfortunately, many growers never see *Eucharis amazonica* as it should be; they have come to know it as a stove plant, and a stove plant it must be with them to the end of the chapter; so, instead of the stout, erect spikes, the deep green, stiff, leathery foliage, we have a weakened and debilitated plant that flowers three or four times a year instead of once naturally, and the blossoms, unable to hold up their pretty heads, droop in a half-ashamed kind of manner about the pale green flower-spikes.

Owing to its great beauty, a taste for the flower has grown up, and market men, to supply this demand, keep their plants over bottom-heat, driving them for all they are worth the whole year round and pick hundreds of the flowers daily. It is well to do so, for they will not last on the plants, and soon wilt and die in any case. They are quite different from the massive, thick petalled flowers that one may see in a cool,

pleasantly moist house where Eucharises really thrive. Here you have not to look for the spikes under the leaves; they push up well above them, and if a plant happens to be needed for room decoration you can take one, and it will be fresh and good in a week or ten days' time, not hanging out over the side of the pot directly it is taken from the enervating heat and moisture.

Why, then, should private growers who cater for a cultural taste imitate the men in the market who have to turn out everything at express speed—cut flowers on the first day of the week for the second day's market, and turn a delightful pursuit into a manufacture of flowers? These latter have to do it, because the day of the old nurseryman who hated to part with his finest plants is gone. But this kind of thing is not necessary in a private garden, and here we ought to see plants grown in the first place for their own intrinsic worth, i.e., their beauty. This with the plant in question is not the case when it is subjected to forcing conditions. The foliage is the true guide to the health of almost any plant, and especially so of that of the Eucharis. Grow a stout, well-leaved plant, and flowers will follow as a matter of course—not every month in the year, but once a year, and then in quantity. The cultural details as to root and atmospheric treatment are of the very simplest, and only sufficient shade to prevent injury to the foliage is required.

H. R.

Repotting Cyclamen.—The young plants of Cyclamen should by now be ready for their flowering pots, and unless they are fit by the middle or end of September they are not likely to do very great things in the way of flowering. My plants are now being repotted from 4-inch or 3-inch to 6-inch and 7-inch pots, according to their strength, and these they will soon fill with roots, making large plants with foliage well over the sides of the pots by the turn of the year, when the flowers are much esteemed. The compost for Cyclamen is in a way a secondary matter, as a good deal of feeding has to be done from the surface after the plants are well established. But choose the best loam at command and use it in a very rough, open condition, adding thereto sharp silver sand, some well-dried cow manure, and plenty of burnt refuse. This last is one of the finest additions to all composts for bulbous plants. The soil should not be rammed with a potting stick, but firmed as tightly as possible with the thumbs. Leave the surface loose, and stand the plants in a fairly light, but cool house, where they are shaded from bright sunshine. Light syringings overhead may be given as long as the weather remains bright.—S.

Statice profusa.—This is one of the fine old plants formerly included in every collection of any note, but which seems in danger of going out of cultivation to a great extent. It is still a favourite plant with those who grow large specimens for exhibition, but it is so useful for conservatory and greenhouse decoration that it is worth a place in all gardens. The flowers are very lasting and also freely produced, so that from early spring to quite late in autumn the plants are usually full of bloom. The culture of *S. profusa* has been much neglected owing to the idea that it is a dirty plant as regards insects. This is certainly not if the proper atmospheric conditions are kept up, viz., plenty of air on all possible occasions and a cool, fairly moist temperature with almost constant exposure to sunlight. Fibrous loam, with a good sprinkling of coarse silver sand and well-dried cow manure suit the plant well, and at no time should the roots be overwatered. They take a fair supply when the plants are large and the pots full of roots, and also a little liquid manure when the flower-spikes are throwing up. That made from clear soot water is best, and its application is followed by increased colour both in leaves and blossoms.—C. H.

Winter-flowering plants.—Things required for early winter-flowering that were planted outside in the beginning of the summer and include

such things as late Chrysanthemums of the L. Canning type, *Salvias*, *Eupatoriums*, *Bouvardias*, *Solanums*, *Callas*, and last, but by no means least, *Violets*, will want looking round early this month to give one of the cuttings in with the spade preparatory to lifting. With the exception of the *Violets*, all these are planted in shallow trenches somewhat in the way prepared for Peas and runner Beans, and, as a rule, shift for themselves with the aid of a good mulching. This season, however, two or three soakings of water have been necessary to keep them on the move. *Solanums* have berried splendidly, and, together with the *Eupatoriums* and *Salvias*, make attractive groups for cool houses. I mean those structures where very little fire-heat is used and the glass on cold nights is apt to drop to 40° and under. The mention of temperatures reminds me to note that we had the first frost this morning, September 11; the thermometer stood at 31°. *Perennetya mucronata* and its varieties, representing so many different shades, is a better berried plant than the *Solanum*, but there are comparatively few places where the flowers will set and the berries develop satisfactorily, and an annual purchase of plants is rather an expensive business. *Violets* for autumn lifting have done well, the plants being large and bristling with buds, but much time and labour were necessary to bring them up to this form. I always plant rooted runners on a north-west border that has been well prepared for their reception, mulching at planting-time with short manure which, as a rule, brings them through satisfactorily. Extra attention was, however, necessary this season, growth being slow and red spider getting a firm hold of the plants, so the ordinary mulch was removed and one of fresh horse droppings substituted, followed by a thorough soaking. This had the effect of checking the attack of the spider. The plants have grown away well and are now nearly clean, but I shall dip them as usual before planting in the pits.—E. BURRELL.

ALLAMANDAS.

I WAS reminded of the beauty and usefulness of these free-growing stove plants recently by seeing a healthy, free-flowered specimen growing in a pot, the numerous growths being trained to a trellis about a foot distant from the roof glass. When well managed, Allamandas will give a succession of their beautiful yellow flowers for several months, the latter being very useful for floral decoration in various ways. The plants when once established require plenty of pot room, being exceedingly free rooting, and good drainage must be afforded, as when in vigorous growth liberal supplies of water will be needed. Good fibrous yellow loam and peat in equal parts, a little leaf-mould and sufficient silver sand to ensure an open condition will grow Allamandas to perfection. Supposing a young healthy plant to be bought in, it should be pruned hard back before the buds start in spring, and given a liberal shift either previous to or after new growth commences. The position given must be a light one, and by rights no shade whatever should be given, as Allamandas delight in full sunshine. If the plants are wanted to cover a considerable space, planting out in limited-sized beds or pits well drained is preferable, and long growths should be allowed; but under pot culture the best way, I think, is to practise pinching the growths once or twice in the growing season, by which means a dense, bushy character is ensured, and the trellis or stakes, as the case may be, are the sooner and more effectually furnished, also freer flowering. Few insect pests trouble Allamandas if ordinary care is given, though mealy bug will prove very troublesome if it comes into contact with the plants. The plants enjoy abundance of heat and moisture, for which reason the syringe must be freely used when the house is closed early on fine, sunny afternoons. Farmyard manure water or that made from steeping a bag of sheep or deer manure in a tub of water, given at every alternate watering, the colour of

pale ale is the best stimulant, and soon makes a mark both on foliage and size and colour of the blooms. In October drying off must be commenced, this being a very gradual process, until in winter little or no water is given. Allamanda cathartica is a fine variety for clothing pillars or rafters, its brilliant coloured blooms being most effective for months in succession. Hendersoni is perhaps the most desirable variety from an exhibitor's point of view, its gorgeous flowers, which are of a deep rich orange shade, being produced in great profusion for at least seven or eight months of the year. Its habit of growth is more branching and short-jointed than in most other sorts and soon covers a trellis. That grand old variety grandiflora, though smaller in its individual blooms, is still unrivalled for its hardy, free-flowering character and the exceptionally clear pale yellow of its flowers. It can be grown without the aid of a trellis, and may be kept very dwarf and bushy by training it to a few sticks when young. For exhibition purposes it is invaluable. Amateurs possessing a stove should plant an Allamanda at one end and train the growths along under the roof. This need not necessarily exclude sufficient light and sun from the ordinary occupants of the house. One of the best plants grown in this way is in Mr. Branton's garden at Winthorpe, near Newark.

J. CRAWFORD.

Schubertia grandiflora.—When looking through the plant houses at Carrow House, Norwich, a few weeks ago I was much struck with the above-named plant growing in one of the stoves. It is of climbing growth, the foliage resembling the large-leaved *Dipladenias*, the flowers, which are produced in clusters of some five or six, being tubular-shaped and white in colour. The scent is rather powerful, though by no means pleasant, and the flowers last some time in good condition. It was growing in a limited-sized bed of loam and peat, and trained to wires some 15 inches or 18 inches from the roof-glass. I learned from Mr. Jones, the gardener, that he annually pruned it hard back, say, in January, and with heat and moisture new growths were quickly made. I had never seen the plant before, although it may be more common than I am aware of.—C.

Chironia ixifera.—This is a pretty greenhouse plant now in flower, and being so dissimilar from the other occupants of that structure, it is sure to attract attention. The Chironias, of which there are about half a dozen species in cultivation, are all natives of South Africa. They belong to the order Gentianaceae, and, like many of their allies, careful treatment is necessary to success. Of one species a coloured plate was given in vol. xlv. of THE GARDEN. This is the procumbent-habited *C. peduncularis*, whose rosy purple blossoms are freely borne. *C. ixifera* is, on the other hand, of an upright style of growth, the branches, which are rather sparingly furnished with narrow, glaucous leaves something like those of a *Dianthus*, being terminated by few-flowered panicles of lilac-rose blossoms about an inch across. The yellow anthers are very noticeable. This Chironia succeeds in a compost consisting of two-thirds good fibrous peat to one-third of loam and a liberal admixture of rough silver sand. A light, airy greenhouse suits it well, and care must be taken not to overwater during the winter months, while at the same time drought is equally injurious to it.—H. P.

Medinilla magnifica.—This fine old plant is not so often seen as it deserves. It is very ornamental when out of bloom, its broadly ovate, rich shining dark green foliage having a fine effect. The flowers, borne in large terminal pendulous racemes, are rosy pink in colour and remain a long time in perfection. A plant which came into bloom the last week in April was taken into the house a few days later and remained there till the first week in June. When brought out it showed little or no effects from its long stay indoors. The plant in question measured 4 feet through, carried eighty-two

spikes of bloom, and was grown in a 13-inch pot. Its culture is very simple, requiring ordinary stove treatment while growing with plenty of moisture. After its growth is made up, the temperature of an intermediate house and less moisture will suit it admirably. Equal parts of peat and fibrous loam, with a little leaf-mould or Mushroom manure and about one-sixth part of silver sand, with a good sprinkling of charcoal added, will make a suitable compost. Cuttings will strike readily in the propagating pit, and with liberal treatment will soon make good plants.—T. S.

TREES AND SHRUBS.

THE WISTARIAS.

EACH recurring spring increased attention is directed to the beauty of the common *Wistaria sinensis*, which is certainly one of the finest hardy climbers that we have in this country. It is equally charming whether trained to a wall, clothing an arbour, pergola, or arch (as the white variety is shown doing in the accompanying illustration), while allowed to ramble over a neighbouring tree it has a very beautiful effect when in full bloom. Again, within the last few years it has been put to an entirely different use, as it is now often forced into bloom and employed for greenhouse decoration in that stage. When so treated, although the massive clusters of flowers are paler in tint than those which expand naturally in the open ground, they are still very distinct from anything else so employed, and form a decidedly attractive feature. It is, however, as a hardy climber that this *Wistaria* commends itself to everyone, and there is a steady and continuous demand for it in nurseries. The roots are few in number, stout, and of a deep descending nature, with scarcely any fibres, and, in common with most plants of this character, it does not transplant readily, and is therefore in some nurseries kept in pots. While this admits of easier removal, the cramped roots do not take so good a hold of the soil as those which have grown untrammelled. I have seen plants lifted from the ground many of which have stood till quite late in the season before they made any signs of growth, even though they were well supplied with water, and some of their number were already in full foliage. Yet, strange to say, as the summer wore on nearly all these dormant plants pushed out rapidly and grew away freely till the end of the season. The following year there was no difference in any of them.

Besides the ordinary form there are several other kinds of *Wistaria* in cultivation. The varieties of *W. sinensis* include

W. S. ALBA, with pure white blossoms. This is very beautiful, but the flowers are, as a rule, neither so freely borne nor in quite such massive clusters as in the common kind. The double blossoms of *flore-pleno* rarely expand in a satisfactory manner, though occasionally good examples may be met with, but even at their best they cannot be compared with those of the type. In the variety *macrobotrys* they are longer and thinner than in any of the others, while the variegated-leaved form is simply rubbish.

A second species, and one perfectly distinct from *W. sinensis*, is

W. MULTIJUGA, which, previous to its flowering in this country, was considered superior even to *W. sinensis*. This was owing to the fact that the descriptions of *W. multijuga* gave the length of its drooping racemes as 2 feet to 3 feet, which turned out to be correct, but at the same time they were not nearly so showy as had been expected. This is owing to the fact that the blos-

soms are smaller and of a lighter tint, but above all to there being a much greater space between them, so that the aggregate of flowers is really little, if any, more than that of *W. sinensis*. Besides these features *W. multijuga* differs from its better-known relative in being less vigorous in growth, with smaller and more numerous leaflets and in flowering somewhat later. There is a variety of *W. multijuga* known as *alba*, but in many cases the blossoms have a lilac tinge, and are not so pure as in the corresponding variety of *W. sinensis*.

W. FRUTICOSA from North America is not nearly so vigorous as either of the preceding, though it is of climbing habit. The racemes of bluish purple blossoms are small compared with those of the others and are not disposed in the same gracefully drooping manner, being partially erect. From the circumstance that it is the only member of the genus from the western continent and the fact that it flowers in June after all the others are past, this *Wistaria* is well worth a

the *Bumalda* section be treated in this way, but the majority of the shrubby *Spiræas* can be increased to a greater or lesser extent by division.—T.

Tecoma radicans.—This plant is now very beautiful with its terminal bunches of bright flowers, and when a plant is sufficiently aged and established, there are few climbers that can fill its place at this time of year. It often fails to flower freely in a young state, but when well established and not cut about too much it will be a beautiful sight for many weeks in autumn. The very tidy gardener who likes to bring everything into line and detests a loose branch will not do much with *T. radicans*. I saw one of this class recently cutting it back, and as the shoots were then about a foot long, it is very unlikely that they will flower this season. He had been trimming up the rest of the shrubs and evergreens, and possibly thought the *Tecoma* needed it. The plant must be left alone to a certain extent; if it is always being hacked at it cannot flower.



White Wistaria at The Larches, East Grinstead. From a photograph sent by Miss E. C. Brown.

place in gardens. The variety *magnifica* is in all respects superior to the type.

Spiræa Anthony Waterer.—The excessively hot summer has, in many places at least, considerably affected this *Spiræa* by taking out the colour of the blossoms, so that in some instances they appeared to be but a pale form of *S. Bumalda* instead of the beautiful rich tint we are accustomed to see. With the return of cooler weather the blossoms have already acquired more of their normal tint than was to be seen when they expanded under the influence of such brilliant sunshine. The drought, too, has in many cases affected it, for *Spiræas* as a class are only seen to advantage in moderately moist soil, hence they suffer considerably during seasons of exceptional drought. *Spiræa Anthony Waterer* is now freely distributed, for it is a plant that can be increased without difficulty, and if planted rather deep it can be split up almost as readily as a herbaceous subject. This must of course be done during the dormant season. Not only can the members of

Besides, its beauty really consists in its loose habit, and the bright scarlet corymbs of blossom need the set-off given by the ample foliage. Though requiring a fair staple to start and grow it, *T. radicans* is perhaps more free-flowering in rather a dry soil. A sunny position where the growth gets well ripened is also essential.—H. R.

The Mountain Ash.—The beautiful berries of the above tree appear to be scarce this season, owing probably to the unfavourable weather when the trees were starting into growth in spring. It ought to be more freely planted in pleasure grounds and public gardens, as, independent of its great beauty in autumn, its general character is very ornamental. The worst of it is, in extra dry seasons, when other food is scarce, blackbirds and thrushes soon strip the trees of their berries. There is a belief among country folk that a rich display of Mountain Ash berries is a sure token of a hard winter. Personally I do not attach any weight to the idea, as generally by November every berry is gone. The colour of the berries on some trees is much darker than in others. This

may, of course, be due to soil and position.—J. C.

CORNISH COTTAGE GARDENS.

In the first week of August I journeyed by road from Devonport to Penzance, passing through Liskeard, Lostwithiel, St. Austell, Truro, and Helston *en route*. The road, a decidedly hilly one, was in many places charmingly picturesque, skirting here heavily wooded valleys, here running water, but the chief interest to the flower-lover was not so much the attractive scenery as the numerous little cottage gardens that in the villages passed through flanked the road. The proprietors evidently vied with one another in keeping their tiny plots well tended, for almost all of them gave evidence of scrupulous care, and scarcely in one of them was a withered leaf or faded flower-truss to be detected. As the evening of an exceptionally hot day approached the gardens showed signs of movement as their master spirits sauntered about within the confined spaces busily engaged in picking off pods from the group of Sweet Peas, securing the tall Hollyhock spire by another tie to the sustaining stake, or deluging the narrow borders with frequent cans of water, the latter proceeding proving a work of supererogation, since the tropical heat of the day culminated after nightfall in a thunderstorm and a copious downpour, which rendered the earth moist for at least a couple of days. It was interesting to note the diversity of plants employed in the decoration of these gardens. In some villages one flower was common to almost every garden, though the remainder of the plants varied according to the whims of the respective tenants. Thus in one village every cottage had a white Everlasting Pea in its garden, while in another a particularly brilliant Phlox that had a great resemblance to *Etna*, if, indeed, it was not that striking variety, appeared to be the favourite plant. Sometimes along the whole length of the street garden after garden showed a family likeness, the same flowers employed and the arrangement very similar, until a note of contrast would be struck by a plot evidently belonging to a man who refused to be bound by the accepted custom and determined to strike out a line for himself. These exceptions to the general rule appeared to be, if anything, even more assiduously cared for than those of the usual type—though the latter showed no symptoms of neglect—as if the proprietor, having introduced an innovation, was determined to demonstrate its superiority to the existing order of things. Almost every cottage that boasted of a porch—and it was a very small minority that did not—possessed some flowering climber that wreathed it at some period of the year with blossom; here the Virgin's Bower (*Clematis Flammula*) was thickly starred with ivory-white perfumed flowers, here a Jasmine twined, or blossoming Myrtles formed a canopy. The blue Passion Flower and its white variety *Constance Elliott* were evidently favourites, and over not a few walls the white flower-clusters of *Solanum jasminoides* hung a snowy veil. Honey-suckles were also largely represented, especially the golden-leaved variety, the latter particularly decorative in the autumnal days, while an unrecognisable plant of shrubby growth that had been trained over the porch of one cottage was so smothered by the widespread white blossoms of the Morning Glory, that its identity was indistinguishable. Here and there the orange-scarlet flower-racemes of *Mina lobata* or the vivid brilliance of a climbing form of *Tropæolum Lobbianum* struck a high note of colour. Other plants not strictly climbers had been utilised for training over walls and porches. Myrtles have already been mentioned in this category, and the Lemon-scented Verbena (*Aloysia citriodora*), *Escallonia macrantha*, *Pyrus japonica*, *Cratægus Pyracantha*, *Cotoneaster microphylla*, and many other subjects were to be seen similarly treated, and in one instance two high bushes of *Salvia coccinea* flanked the porch and testified to the prevailing mildness of the climate. Ivy-leaved Pelargoniums in many

cases provided most attractive displays, the variety chiefly patronised being the salmon-pink *Mme. Crousse*, though occasionally the rose-cerise of *Souvenir de Charles Turner* was apparent. In some instances these Pelargoniums had been trained up the walls to a height of 6 feet or more, having probably been planted in the late spring of 1895, but a lengthened period of severe weather, such as was experienced during the opening months of that year, would doubtless kill the plants or so far cripple them as to render their display valueless the following summer.

Large bushes of *Fuchsias*, not only of *F. gracilis* and *F. Riccartoni*, but of forms with crimson perianth and white corolla and white perianth with purple corolla, were common. Large plants of *Calceolaria* that had probably been in position for some years were golden with bloom, and in some instances apparently fully 3 feet in diameter. Dahlias were grown in many of the gardens, but the Cactus varieties were in a decided minority, the old show Dahlias and pompons evidently still retaining the precedence. The tall Hollyhocks had seen their best days, but the upper blossoms of the lofty spikes still glowed against the white-washed walls. Out of the numerous plants that I saw there were none that did not possess double flowers. Phloxes were bright in many gardens, but except in a few villages decided colours were in a minority, and washed-out purples, magentas and pinks preponderated. Japanese Anemones were commencing their display, the white variety outnumbering the coloured forms by ten to one. *Statice latifolia* was in flower in not a few gardens, but I did not notice a single plant of the still more delicate *Gypsophila paniculata*. *Gladiolus brecheyleyensis* was to be found in most of the gardens, and *Montbretias* were in full flower in a few, while in one half a dozen plants of the new large-flowered *Cannas* were in bloom. Perennial Sunflowers and Golden Rod were entering on their season of effulgent brightness, and the great annual Sunflowers hung their heavy golden-rayed brown discs over many a cottage paling. Other annuals, such as *Phlox Drummondii*, *Asters*, *Godetias* and *Balsams*, afforded bright spectacles, and at Newlyn a mantle of *Mesembryanthemum edule* hung from a wall abutting on the harbour, exactly above the stem of a hauled-up fishing lugger. In the window of one cottage that I passed I noticed three plants of *Campanula isophylla alba* that were pictures of successful culture, being veritable cascades of bloom-covered trails.

S. W. F.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 26.

TAKING into consideration the fact that the fruit show at the Crystal Palace is also held during this week, the number of exhibits on Tuesday last was remarkable for extent and variety. Had the average amount of fruit been staged it would have been a very full meeting. Amongst cut flowers the Dahlia was pre-eminent, notably so of the Cactus section; of these, a few more distinct acquisitions will be noted upon a perusal of the following report. Early Chrysanthemums, of course, were to be seen, but as yet these are not so much needed as they will be in October. Fine-foliaged plants, composed chiefly of Crotons, were a fine feature, demonstrating their value in this particular line. A good example of decorative grouping was also presented. Those who are in the habit of packing their groups would do well to take a lesson from the one in question, in which every plant told to the best possible advantage. Orchids were fairly plentiful and of first-class quality, notably the hybrids of the *Lælio-Cattleya* families, *L.-C. Nysa* being specially fine. Beautiful forms of *Cattleya Hardyana* were also staged from other sources. Only one collection of vegetables was staged for the Sherwood cup, and the exhibitor of the same is to be highly con-

gratulated upon his efforts and upon the superior quality of his produce. A few Apples were staged, one collection from Scotland being very good indeed for the northern part of the country.

Orchid Committee.

Awards of merit were adjudged to the following:—

CATLEYA WEEDONENSIS.—A hybrid derived from the intercrossing of *C. Mendeli* and *C. granulosa* var. *Schofieldiana*. It belongs to the section of hybrids to which the natural hybrid *Cattleya Czar* is allied. The sepals are greenish white, flushed with rose; the petals of good form and substance, deep rose, suffused with a bronzy tint. The lip is rich crimson-purple on the front lobe, mottled and margined with rose; the side lobes white, becoming yellow at the base, with a tracing of brown on the disc. A cut raceme of three flowers came from the collection of Mr. T. W. Thornton, Brockhall, Weedon.

ODONTOGLOSSUM CRISPUM BASANO.—In this the sepals are white, with only the faintest trace of colour. The petals are pure white, beautifully crisped on the margin; the lip white, with a large yellow disc. There is one large blotch of chocolate-brown in the centre, with a few smaller ones at the sides. The plant, which carried a raceme of eleven flowers, came from Mr. W. Cobb, Dulcote, Tunbridge Wells.

Messrs. J. Veitch and Sons, Ltd., were awarded a silver Flora medal for a large and interesting group, which included many meritorious varieties of both hybrids and species, considering the dull period of the year. Among the hybrids were some good forms of *Lælio-Cattleya Nysa*, one of the most beautiful of the *L. crispata* hybrids. It is superior in the better forms, but in the ordinary varieties it would be difficult to distinguish it from varieties of *L.-C. exoniensis*. The sepals and petals are deep lilac; the front lobe of the lip crimson, margined and fringed with rose; the side lobes yellow, becoming suffused with deep brown at the base. *L.-C. callistoglossa* was included in various forms. *L.-C. Fortuna* has delicately tinted rose flowers with a rich crimson-purple blotch in the centre of the front lobe. *Cattleya Chloe* is one of the most distinct and best coloured of the *C. Bowringiana* section of hybrids. The sepals and petals are a deep mauve-crimson, flat, as in *C. bicolor*, the lip also partaking of the characters of that species. The long front lobe is intense crimson-purple, veined with a darker shade of the colour, the small side lobes delicate rose with some purple at the base. The species included good forms of *Cattleya labiata*, *C. aurea*, *C. granulosa*, *C. Patrocini*, and good varieties of *C. Loddigesi*. *Dendrobiums* included *D. formosum* and *D. superbiens*. *Zygopetalum maxillare* and *Oncidium* of the *O. phymatochilum* section were well represented. The scarce *Houlletia Brocklehurstiana*, with five of its two shades of brown and black spotted flowers, was most attractive. *Odontoglossums* were represented by a superior variety of *O. grande*. *Cypripediums* included good specimens, well flowered, of *C. Spicerianum*, *C. Charlesworthi*, *C. ænanthum superbum*, *C. Milo* and *C. Charles Canham*. A plant of *Angræcum articulatum*, with its pure white flowers, was also well represented. Messrs. Hugh Low and Co., Bush Hill, Enfield, were awarded a silver Banksian medal for a nice group. In the back row were two good varieties of *Vanda cœrulea*, also some well-flowered plants in good variety of *Oncidium Marshallianum*. The rare *O. incurvum album* and *O. ornithorhynchum album* were also represented. *Cattleyas* included good varieties of *C. velutina*, *C. Loddigesi*, *C. Gaskelliana alba* and *C. Eldorado Wallisi*. The hybrids included *C. Minucia*. Several forms of the natural hybrid *Lælio-Cattleya elegans* were also included, as were *L.-C. exoniensis* and good varieties of *Odontoglossum grande*.

Mr. C. H. Fielding, Southgate House, Southgate, sent a nice group, consisting of numerous varieties of *Dendrobium Phalenopsis* and *D. formosum*. The *Cattleyas* included a nice form of

C. Loddigesi, several C. Gaskelliana, and numerous Cypripediums of both species and hybrids. A silver Banksian medal was awarded. Mr. T. B. Haywood, Woodhatch, Reigate, sent a distinct and pretty form of Cypripedium Fowlerianum, possessing the intermediate characters of the parents. Mr. R. I. Measures sent Cypripedium Lachme, the petals being particularly fine. Mr. W. M. Appleton, Weston-super-Mare, sent Cypripedium enfieldiense and C. Julia (Lawrenceanum \times Exul), the flowers intermediate in character, the spottings of C. Exul being particularly prominent in the upper sepal. Mr. H. Little, Twickenham, showed the lovely *Cattleya elegans* var. *Littleana* and Cypripedium Sanderianum. The Rev. F. Paynter, Stoke Hill, Guildford, sent a yellow variety of *Odontoglossum grande* and a hybrid *Cattleya* of the L.-C. elegans section. Mr. H. T. Pitt showed the lovely *Cattleya Hardyana* (Pitt's variety), one of the best forms we have seen. The lip was upwards of 3 inches across. Major Joicey sent a dark form of *Dendrobium taurinum*, and Mr. W. Cobb had a bright and pretty form of *Cattleya Hardyana* with a three-flowered raceme.

Floral Committee.

The following received an award of merit :—

DAHLIA MME. THEODORA HENSON (Cactus).—A distinct shade of scarlet, the pointed florets somewhat narrow and slightly incurving. From Mr. T. S. Ware, Tottenham.

DAHLIA AUGUSTUS HARE (Cactus).—In the earlier stages the predominant shade is crimson-scarlet and very showy, but a little later a decided flame-coloured scarlet replaces it and imparts quite a novel feature to the flower. In the latter stage it is one of the most distinct Dahlias of the year. From Mr. James Stredwick, Silver Hill Park, St. Leonards.

CARYOPTERIS MASTACANTHUS.—This will be welcomed for two reasons, viz., its colour and its late flowering. The habit of the plant is rather meagre, and the nearly erect stems are well clothed with dark green leaves that assume a whitish tone beneath. The flowers, which are of a distinct lilac-blue tone and produced in alternate axillary clusters, are borne on pedicels about 1 inch long. These appearing in considerable profusion render the plant very attractive at this season, when flowering shrubs of this colour particularly are far from common. Cut sprays were contributed by Messrs. Barr and Sons, Covent Garden, and a basket of small plants came from Messrs. James Veitch and Sons, Ltd., Chelsea.

There was a considerable falling off in the numbers of the groups as compared with the preceding meeting, though enough remained to constitute a very good effect for the season of the year. One of the chief groups was that from Mr. H. B. May, Dyson's Lane, Edmonton, which was mainly of small and useful-sized Crotons, some sixty varieties of these plants being staged. The whole of the plants were in small pots and finely coloured. In the narrow-leaved section we noted *The Countess*, *Superbus*, *Doucetti*, a rather densely-leaved kind and well coloured; *Ruberimus*, very rich in colour, an extremely showy kind under artificial light; *Imperialis aureus*, one of the narrowest-leaved varieties in this group; *Mrs. Dorman*, and *Aigburthiensis* as among the more distinct and beautiful. Among the broad-leaved kinds were such well-known forms as *Morti*, *Reedi*, *Alexander III.*, *Comte de Germiny*, *Thomsoni*, rich golden leaves excepting the tips, which are variegated with green; *Baron Frank Selliere*, yellow and dark green; and *Newnani*, of a rich reddish colour for the most part. A few small Palms, *Eulalias*, Ferns, *Isolepis*, and *Lygodiums* were interspersed here and there through the group (silver-gilt Banksian). A very pretty and well-grown group of *Statice* in variety (seedlings probably) was staged by Messrs. Hugh Low and Co., Enfield. The plants were compact, less than 15 inches high, in 5 inch pots, and very attractive on account of their free-flowering. A pretty *Kentia*, *K. Veitchi*, with dark and almost mottled stems, was also noted in

this group. Mr. S. Mortimer, Farnham, again set up a brilliant lot of Dahlias, each kind good in itself. It would be well if this idea were more strictly adhered to, not in respect to exhibitors of Dahlias exactly, but in other groups where the notion obviously exists of bringing all, good, bad and indifferent. The outcome of this is an overwhelming mass of things, the very bulkiness of which tends not only to mar the effect of the best kinds, but in reality to obscure them from view. Mr. Mortimer's flowers were fresh and distinct. A few of Mr. Mortimer's best among Cactus Dahlias were *Starfish*, *Exquisite*, *Harmony*, *Gloriosa*, *Keynes' White*, *Mary Service*, *Magnificent*, *Alfred Vasey*, *Ebony* (a very dark flower), and *Harry Stredwick*, perhaps the darkest of all the race. These were disposed in good sensible bunches and the colours well mixed also. Apart from these, some ten or more boards of show and fancy kinds were staged, the flowers very good and well finished (silver Flora medal). Mr. Sander, St. Albans, sent a few plants of *Dracena Godseffiana*, *D. Sanderi*, some medium-sized plants of *Acalypha hispida*, and the graceful *Linosyris Petrickiana*. Messrs. James Veitch and Sons, Chelsea, had groups arranged in baskets of the pretty *Caryopteris mastacanthus*, *Hydrangea Hortensia Mariesi* with pale blue flowers of large size, and a pretty red-leaved shrub, *Nandina domestica*, which should be useful for its colour effect so early in the season. Messrs. J. Hill and Sons, Lower Edmonton, had an exceptional group of the varying forms of *Asplenium Nidus*, many of the plants being of large size and well grown. The plants were arranged in a setting of Maiden-hair Ferns in variety, above which the broad shining fronds of the *Aspleniums* were very telling. Plants were also shown of the variegated *Ficus*, *F. radicans variegata* (silver Flora medal). Mr. James Stredwick, Silverhill Park, St. Leonards, had some good kinds of the Cactus Dahlia, such as *Mrs. Sanders*, yellow; *Mayor Weston*, *Magnificent*, *William Jowett*, scarlet; *Mayor Tuppeny*, orange-red and yellow; *Autumn Queen*, *Uncle Tom*, and *Chas. Woodbridge*, a finely coloured crimson (bronze Banksian medal). Mr. T. S. Ware, Tottenham, arranged an extensive bank—too dense, as we think—of single, pompon, and Cactus Dahlias, together with some few good and distinct Michaelmas Daisies, summer-flowering *Chrysanthemums* in variety, *Pyrethrum uliginosum*, a few Torch Lilies, grasses, Bamboos, and such like plants, for which a silver Banksian medal was awarded. Messrs. Barr and Sons, Covent Garden and Long Ditton, brought an interesting gathering of hardy things in season. Some of the early Michaelmas Daisies, as *A. Amellus*, of which *Riverslea* and *Framfield* are good and noticeable, as well as distinct kinds; *Aster acris*, *A. levis arecturus*, with dark shining stems; *A. Lindleyanus*, &c. Very good, too, was the white Everlasting Pea and the distinctly coloured *Verbena venosa*, the latter much too little grown. Among Torch Lilies, *Kniphofia Leichtlini*, *K. L. distachya*, *K. Triumph*, a bold yellow-looking spike, were prominent. *Senecio pulcher* was very good, and *Convolvulus mauritanicus* pretty in the pale mauve flowers. *Helenium nudiflorum*, *Sedum Ewersi*, and a set of summer-flowering *Chrysanthemums* were also included in this lot. A variegated grass, *Glyceria spectabilis variegata*, which is, perhaps, too short in its growth to prove very telling in the garden, and a pair of *Zauschnerias*, *Z. californica splendens* and *Z. mexicana*, were also contributed by the same firm. Mr. W. J. Godfrey, Exmouth, sent a late-flowering border Carnation, *Mrs. George Foster*. It is a yellow flowering kind, a pod-burster, unfortunately, though of good size. From the same source came the yellow sport of *Chrysanthemum Lady Fitzwygram*. The colour of the flowers is so very pale that it could easily be taken for a poor white under artificial light. Mr. W. Wells, Earlswood, Redhill, had a few early-flowering *Chrysanthemums*, mostly, however, of the Japanese kinds. Perhaps the best of his lot were the yellow-flowered *Mme. Liger Ligneau*, which is good in

colour, early in flower, and dwarf in habit; *Jules Mary*, crimson; *Market White*, *Jeanne Villermot*, a chestnut-red sort; *Mytchet White*, *Mme. Marie Masse*, and the so-called crimson *Mme. M. Masse*, which is certainly anything but crimson in point of colour. It is certainly related to the popular kind mentioned, and may best be described as a chestnut-bronze. A variety named *Victor* is said to be a sport from *Mrs. Hawkins*. It is, however, no sport as this term is understood; it is but a reversion to the original white kind *Mme. C. Desgrange*, from which it in no wise differs. Some wretchedly small flowers of this last were shown by way of comparison. A small plant of *Retinospora pisifera aurea Rogersi* came from Mr. W. H. Rogers, Bassett, Southampton, but beyond being of a golden hue and in its present form bearing some semblance to the well-known *Golden Lawson's Cypress*, no definite opinion could be formed, as the example was too small and quite undeveloped for a *Retinospora*. This much should be stated plainly, because frequently the committees before whom such things are placed are charged with favouritism by those sending things from a distance. In the present instance quite two years' growth and development are necessary before any definite opinion can be formed of such a plant. A group of fine-foliaged plants with Ferns and similar things came from the gardens of Sir Henry Tate, Bart., Park Hill, Streatham Common (gardener, Mr. Howe). The plants employed were of the usual order of such groups—Palms, *Dracenas*, *Crotons*, and such things in unlimited numbers being arranged amid Ferns, the variegated *Eulalias*, and other plants. Some excellent examples of Bamboos occupied the extreme corners of the group at the back, while in the immediate front a pair of *Aralia elegantissima* were placed. A silver-gilt Banksian medal was awarded. The Dowager Lady Freake, Fulwell Park, Twickenham (Mr. A. H. Rickwood, gardener), sent a good variety of *Cannas*, mostly, however, of the green-leaved kinds. The collection included many of the best kinds now in commerce—shades of crimson, scarlet, yellow, and this last with scarlet spots predominating.

Fruit Committee.

This committee had its fair share of exhibits and most of them of excellent quality. The collection of vegetables staged for the Sherwood cup was a notable exhibit, and the Apples from Galloway were excellent.

Awards of merit were given to the following:—

PEAR TRIOMPHE DE VIENNE.—A large, handsome early fruit with rich flavour. It is a heavy cropper, strong grower, and forms a good bush or pyramid tree. From Mr. G. Woodward, Barham Court Gardens, Maidstone.

POTATO THE SIRDAR.—This, one of the varieties tried in the society's gardens, is a midseason or late variety. It is of excellent quality and a good cropper. From Messrs. Hurst and Son, Houndsditch.

POTATO ELLINGTON.—This varies, but is usually pebble-shaped, with rather deep eyes. It is a first-rate cooker and cropper and a late variety. From Mr. Ellington.

Mr. E. Beckett, Aldenham House Gardens, Elstree, was the only competitor for the Sherwood cup. The conditions for the same were that it must be competed for on two occasions, and on each Mr. Beckett has been the only exhibitor. On this occasion forty dishes were set up, these obtaining 160 points, salads being the weakest. Onions *Ailsa Craig* and *Cocoa-nut* were excellent, as also were *Model* and *Intermediate Carrots*. *Cucumber Beckett's Ideal* was good. *Autumn Giant Cauliflower*, four varieties of dwarf Beans and runners, the same number of Vegetable Marrows, a good dish of *Autocrat Peas*, *Red Globe* and *Prize-taker Turnips*, *Celeries White Gem*, *Standard-bearer* and *Prize-taker*, *Kales* in variety, *Goldfinder*, *Windsor Castle* and *Satisfaction Potatoes*, *Leeks*, *Brussels Sprouts*, *Par-snips*, *Salsify*, *Scorzoneria*, *Celeriac*, *Capsicums*, *Tomatoes* and *Beetroot* were also included. From

Mr. W. Day, Galloway House Gardens, Carlisle, N.B., came a very good lot of Apples, notable for their grand colour, considering their having been grown in the north. Thirty-six varieties were staged. The fruit lacked the size of that of our home counties. The best kinds were Lane's Prince Albert, Peasgood's Nonsuch, Tower of Glamis, Loddington, Blenheim Orange, Galloway Pippin, Jas. Grieve, and Lady Kinloch, a late cooking variety raised by the exhibitor. In the dessert varieties, such kinds as Adams' Pearmain, Worcester Pearmain, Jacob's Seedling, and Duchess of Oldenburg were excellent, the exhibit well meriting the silver Knightian medal awarded. A new black Grape was much admired by many on account of its fine oval berries, beautiful colour, and finish and shape of bunches. This was called Diamond Jubilee, and was sent by the Messrs. Buchanan, Forth Nurseries, Kippen, N.B. A new seedling Grape was sent by the Messrs. Pearson, Chilwell Nurseries, Notts. It is a cross between Bowood Muscat and Gros Colman, and has oval amber berries with a brisk, refreshing flavour. The fruit sent had been grown on a pot Vine, and the committee desired it to be sent again from permanent Vines. Mr. Ross's new Apple T. A. Knight was again brought up from Chiswick, but not in sufficient quantity for an award, and the committee desired the raiser to send fruits to the next meeting. This is one of the best seedling Apples we have seen, the parents being Cox's Orange and Peasgood's Nonsuch. Seedling Apples came from Messrs. R. Hartland and Son, The Nurseries, Cork. One named Stone Peach was not considered of any value, but Hartland's Pearmain will doubtless be sent again. Mr. A. Bacon, Romford, sent seedling Apples Wheatsheaf Russet and Bacon's Seedling, but both lacked quality. Mr. W. Green, of Wisbech, sent Apple Emmett's Early. This was stated to be the same Apple as the committee recently gave an award to under the name of Early Victoria. Melon Gunton Scarlet was sent by Mr. Allan, Gunton Park, Norwich, but was too ripe. Mr. Doe, the Gardens, Knowsley, Prescott, sent a green-fleshed Melon Countess of Derby, and a scarlet-fleshed netted fruit called Salmon Queen came from Mr. Bewick, Walton-on-Thames. The Rev. Darnley Smith, Ashburton, Devon, sent his new fruit protectors with fruit that had been protected, and some otherwise. There was increased size in the protected fruits. Mr. C. Curtis, Penang, Straits Settlements, sent fruits of Mangosteen, but not in good condition.

National Chrysanthemum Society.—A meeting of the executive committee was held at Carr's Restaurant, Strand, W.C., on Monday evening last, Mr. P. Waterer occupying the chair. The chairman announced that the new medals had been ordered, and he felt the members would unanimously approve of what the finance committee had done in the matter. Mr. A. E. Stubbs made a practical suggestion with reference to the question of running excursion trains into London for the purpose of inducing country members and their friends to attend the shows of the society. A sub-committee was appointed to consider the matter. The chairman announced that Messrs. Green and Nephew, of Queen Victoria Street, E.C., had the vases in course of preparation which they were lending the society for the purpose of exhibiting the sixty specimen Japanese blooms on the occasion of the show in November next, this being the new and special feature of the present season. The vases would be 16 inches in height, and not 18 inches, as stated in the schedule. The secretary announced that in future, exhibits submitted to the floral committee would be numbered, an arrangement which was readily assented to by the committee. Mention was also made that the new rule regarding certificates would come into operation at the meetings of the floral committee this year. In future the support of three-fourths of the committee present would be necessary to obtain a certificate, and if there were not more

than ten members present the voting must be unanimous. An invitation was given to members to visit the Lyons Chrysanthemum show on Friday, November 3. It was intimated that already several members had promised to attend, and it was hoped more would join the party. Communications regarding this matter should be addressed to Mr. C. Harman-Payne, the hon. foreign corresponding secretary. Eight new members and one Fellow were elected.

NOTES OF THE WEEK.

Convolvulus mauritanicus.—The flowers of this pretty trailing plant are always admired. It may perhaps be described as between a French grey and a very delicate pale sky-blue, a soft tint that renders the flowers almost transparent. The plant is free-flowering, and given freedom will maintain a profusion for many weeks in succession.

Dahlia Mrs. Sanders (Cactus).—Among the self yellow kinds this is a pre-eminently good one—one that is likely to find favour when distributed to the public, provided always that in habit of growth it is as desirable as the flowers would make it appear. So much depends upon habit of growth in these plants, that one is loth to praise any variety from flowers alone.

Kniphofia Triumph.—In point of colour this kind is not unlike some others of this fast-increasing family, the colour being yellow, with tones of amber and light apricot. It is, however, in its freedom of flowering that its value lies, as each stem has two, and sometimes three, smaller spikes attached to the sides. These will not only afford a later supply of bloom, but on account of their much smaller size will be useful in a cut state.

Senecio pulcher is one of the finest border plants of early autumn. To see it at its best and to retain it in perfection so as to secure a good display of blossom each year, one must adhere strictly to a system of propagation that may prove too much for many amateurs, who have to content themselves with plants less exacting in their requirements. All the same, the beauty of a fine group of this Groundsel is not soon forgotten.

Chrysanthemum Mme. Liger Ligneau—For those that mere size will satisfy, this variety may be mentioned as among the largest of the early-flowering kinds yet introduced. But if early and large, it scarcely comes into the category of the so-called summer-flowering Chrysanthemums, and possesses but little of the freedom and abundance that characterise so many of the beautiful kinds now in commerce. It is, however, of excellent colour and of good size. The habit is also quite dwarf.

Fruiting of the Indian Bean.—The Indian Bean (*Catalpa bignonioides*) is producing fruit in great abundance at The Dignaries, Blackheath, or rather Westcombe Park. The pods, which greatly resemble those of the runner Bean, average nearly 11 inches in length and are of a bronzy brown colour above, light green beneath. Probably the unusually warm summer has had to do with the abundant flowering of the *Catalpa* all over Southern England at least.—A. D. WEBSTER.

Cyclamen hederifolium.—The pretty Ivy-leaved Cyclamen is making a pretty picture in the garden at the present time. That these pretty early autumn flowers thrive with so little care and prefer dryness to moisture is a matter that should be known to all who prefer to grow hardy things in every possible position. Beneath the shade of trees or small shrubs these plants are quite content, and not merely give a pretty display of blossoms in their season, but furnish the ground with handsome foliage during winter. Once established they give but little trouble.

The Aquarium Dahlia show.—Unable to visit this show on the first day, I went upon the second early in the afternoon, and was greatly pained as well as disappointed to note how wretchedly faded and withered were the majority of the Cactus blooms, no matter how set up. It must have been very disappointing and annoying to visitors to the show on the second day to see such a general collapse. The chief object in holding the show was to enable seedlings to be exhibited for certificates. The poor array of new ones and the few certificates granted lead to the inference that the primary object of the show

resulted in failure, and it may well be questioned whether it is worth repeating.—A. DEAN.

Chrysanthemum Lady Fitzwygram (yellow variety).—A basket of plants of this kind was among the exhibits at the Drill Hall this week. It is evidently a sport from the original and quite distinct, but of too pale and washy a tone to be of much service. Like the white kind, this could only be of use after severe disbudding, and as a garden plant, and a border plant in particular, this should prove a disqualification. Lady Fitzwygram produces the flowers at so many levels one above the other and in such quantity, that unless disbudding is early resorted to the flowers are small and insignificant.

Montbretia crocosmiæflora.—There are many plants such as this which, with roots in a deep bed of soil, flourish in the great heat of such a year as this. In a season which is the reverse the flowering is usually less fine and the foliage does not retain its freshness in a similar degree. To see a group of this plant at its best the corms should either be established or have been planted in early autumn so that they have taken well to the soil. Too frequently the planting of these things is deferred till quite late in spring, and then with no allowance for diminished vitality. Then if a hot, dry season ensues the plant has but a poor chance to show its value.

Phygelius capensis.—This seasonable flowering perennial is among those things to which attention is frequently directed. It is a good and distinct as also a serviceable autumn-flowering plant, sufficiently hardy, too, for our climate, though bearing a suspicious name. In winters of extreme severity it may be lost outright, and more especially if the plants are old, but in a cold northern district with clay soil I have grown this plant quite satisfactorily. Indeed, though badly cut down, so far as any vestige of life was apparent above ground, the more deeply-covered roots have sent forth shoots again in spring. The reddish scarlet flowers are now attractive, and in good soil the plant will attain from 2 feet to 2½ feet high.

Caryopteris mastacanthus.—This recently introduced shrub promises to be valuable in gardens. It is hardy, it is late flowering, and of a good blue colour. Such things among shrubs late in the year—September and October, for example—are not numerous. A nice lot of this in good flower was shown at the recent meeting in the Drill Hall. A nice plant was noted recently in the gardens at Gunnersbury House, where in early September it had begun flowering. It is not a particularly bushy plant if left alone, yet a good bush could be formed by the early and judicious use of the knife. Indeed, if pruned in the early part of the year to within a few inches or a foot of the ground a greater number of shoots would push forth. Even the small plants alluded to above had many breaks at the base from the quite hard wood.

Ranunculus Lyalli.—I feel indebted to "J. L.," Hawick, for writing regarding this New Zealand plant, with which so many have failed. I had the pleasure of seeing the plant at Easter Duddingston Lodge while it was in seed, but until now I was unaware that it had died after seeding. My experience with most seeds from New Zealand is much like that of your correspondent: they germinate badly. The seeds of *R. Lyalli* failed to grow with me. One fears that we have not yet discovered the secret of growing this *Ranunculus*, but there is so much variety of soil and climate in the United Kingdom, that someone may succeed where others have failed. The establishment of so fine a plant is worth a good deal of trouble, and I think some of the many enthusiastic growers in Ireland have a better opportunity of growing it than we in the sister isle.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Romneya Coulteri in Scotland.—I have observed several notices of the hardness of this beautiful plant. I have had it growing outside against the house here for two and a half years or

thereby. The aspect is south, but it is fully exposed to S.E. and S.W. winds, and has only had a rough protection of loose Heather in the winter. The last two winters have not been severe—that is, the minimum temperature has been moderately high and frosts have been of short duration. The plant flowers freely, and now, after the recent rains, still shows a great many buds. Earwigs are a very great trouble and very fond of the flowers, boring into the unopened buds and destroying them. It well repays any little trouble there may be needed, giving winter protection. Here it does not ripen seed. I have tried layering to propagate it, but failed, the branches withering in spring.—Wm. Low, *Monifieth, N.B.*

Aster Thomsoni.—This distinct and pretty Starwort does not appear to be grown so freely as its merits would warrant. One finds that some have a prejudice against Asters which come as early into bloom as this. Probably this may account for the infrequency with which one sees it in gardens, even in those with large collections of hardy flowers. My first acquaintance with it was made in the gardens of Edge Hall several years ago. Recently I came across the plant, as I have known it for some time, together with a dwarfier variety of a different tint of colouring. This was at Kirkconnel, in Kirkcudbrightshire. The dwarfier form was, I thought, even prettier than the other. It would be not more than a foot high, and rather bluer in colour than what I had seen and grown before. *Aster Thomsoni* (not *Thompsoni*) comes into flower early in July in good seasons, and lasts in bloom for some time. It comes from the Himalayas.—S. A.

Iris Susiana at Tynninghame, N.B.—One meets with, and hears of, so many disappointments with *Iris Susiana*, not in Scotland only, but throughout the kingdom, that it is a pleasure to come across it doing well and giving satisfaction. Thus it was with pleasure that I noted a nice little clump in the beautiful gardens of the Earl of Haddington at Tynninghame, Haddingtonshire. The *Iris* was at rest, but an examination showed hard, firm bulbs, such as are almost sure to bloom in anything like a favourable season. *Iris Susiana* has been at Tynninghame for several years, and Mr. Brotherston informed me that it flowers regularly. The position is one which suits it well. It is grown at the foot of a sunny wall, where it can receive a good roasting in summer—conditions under which this *Iris* is usually fairly successful—although with us in the west, where we have, as a rule, more moisture in summer, these do not always bring success. These Cushion Irises are so attractive in their own way, that those who have even a chance of succeeding with them should not fail to make the attempt.—S. ARNOTT.

Phlox Le Mahdi.—The raiser of this *Phlox* might well have given it a name which would have been more acceptable to flower growers than he has done. While not caring for its name, one cannot, however, but admit that it is a distinct step in the advance towards attaining a really blue *Phlox*. Until the coming of *Le Mahdi*, the nearest approach to a blue among the tall *Phloxes* was in the flowers of one named *Iris*, which, unless I am mistaken, originated in the same continental nursery as the subject of this note. *Iris* was well shown among other hardy flowers at the recent autumn show of the Royal Caledonian Horticultural Society in Edinburgh. The later production, in the form of a young plant, appeared in the stand of Mr. John Forbes, of Hawick, at the same show, so that one could compare them properly. This was only from a colour point of view, as a small plant such as that of *Le Mahdi* could not be expected to yield either such fine spikes or so large pips. The colour is, however, much deeper and rather bluer than that of *Iris*. As a garden flower it will not be prized for its brilliancy, although it may be appreciated for its rare colour among the *Phloxes*.—S. A.

Leucojum roseum.—I regret to say that I have been no more successful with *Leucojum roseum* than the Rev. Mr. Ewbank, so that I fear

that I am unable to give him any assistance in the way of suggestions for its cultivation. Personally, I should feel greatly obliged to anyone who has succeeded with this pretty little Snowflake and can give us any hints as to how it should be treated in this climate. If Mr. Ewbank, with all his experience and perseverance, has been unable to get it to bloom at Ryde, I fear there is but little prospect of many of us being fortunate enough to induce it to flower. Perhaps some reader of THE GARDEN in Devon or Cornwall may have succeeded where we have failed, and will kindly favour us with his treatment. While we are on the subject, one may also ask if anyone can enlighten us as to our chances of growing *L. trichophyllum* in the open. This has been tried here twice in different positions, but on each occasion the bulbs have died. The evil seems to be that growth is made too early and that the tender leaves are killed, to the destruction of the bulbs. This is a common cause of loss here, especially in the case of purchased bulbs which have been ripened off early in a warmer climate than ours. This initial difficulty overcome, there is not much fear of losing *Leucojum autumnale*, which is so pretty that it should be grown by all who care for delicate beauty in flowers even if they are lucky enough to bloom the charming *L. roseum*.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Statice penduliflora?—Under the name of *Statice pendulifolia* there is rather a nice *Statice* in the nursery of Messrs. Cunningham, Fraser and Co., Comely Bank, Edinburgh. The name, so far as one can discover, has no authority to support it. There is nothing in the habit of the leaves to make the name in the slightest degree appropriate; but, as Mr. A. MacSelf, who has charge of the department, says, the name of *penduliflora* would be in agreement with the drooping tendency of the flowers. Many of the Sea Lavenders are, however, difficult to identify, and it is doubtful if anyone would undertake to refer this variety to any particular species. This *Statice* grows to about 3 feet or so in height and has small, but pretty, blue flowers in graceful panicles. As already mentioned, these are of a drooping habit, which, although not very pronounced, gives the plant a character of its own. Autumnal-blooming flowers of the style of the Sea Lavenders are too little seen in our gardens, and one feels justified in thinking that their worth ought to be more fully recognised, by their being more grown. In addition to the charm they give by their gracefulness to the flower border, they may also be prized for their value as dried flowers for house decoration in winter. They dry quite readily, and form a nice change from the equally graceful *Gypsophila paniculata*, another invaluable thing for ornamenting the house in winter. The plant which has given rise to these remarks seemed to be the only one in the nursery, and I was unable to ascertain its origin.—S. A.

Anemone alpina.—The article by "E. J." in THE GARDEN of September 23 deserves a careful perusal from all who grow, or have tried to grow, the beautiful *A. alpina* and its variety *sulphurea*. This note is written, not for the purpose of differing from the treatment advocated, but, if possible, to induce some to observe the advice given regarding abundance of root moisture. I can well recollect in my early days of growing alpine how I lost plants of these Windflowers from planting them in places which were too dry. In this garden I find them do best at the base of rockwork, where they can have a proper supply of water with, at the same time, abundance of drainage.—S. ARNOTT, *Carsethorn*.

—I was much interested in reading "E. J.'s" article on *Anemone alpina*. He does not say a word too much in praise of this beautiful Windflower. I have now some well-established plants of it raised from seed which I gathered in Switzerland. I have counted twenty-five blooms on one plant, and the plants flower abundantly every year. I would recommend it being raised from seed, which, if sown as soon as it is ripe, should

germinate the following spring or summer. It is very impatient of any disturbance of the roots. The sulphur variety is quite as well worth growing as the white, and is raised in like manner from seed. It is of a very pure and fine shade of yellow, and quite as free-flowering as the white. The two together make a charming group. There is another *Anemone* the seed of which I also gathered in Switzerland, though I do not know if it can rightly be called alpine; it is, I believe, called *narcissiflora*. It is not so striking a plant as either the white or sulphur, but it is very pretty and well worth growing.—H. H., *Daljarrock, Ayrshire*.

The weather in West Herts.—The past week was the first unseasonably cold one since the middle of June, and yet, after all, the mean temperature was only a few degrees lower than is seasonable. As the present month has advanced the weather has been getting gradually cooler, so that the ground at 1 foot deep is now rather colder than is usual at this time of year, but it is still somewhat warmer than the average at 2 feet deep. Some rain has fallen nearly every day during the week, but the total measurement amounted to less than half an inch. A selected plant of wild Ivy came first into blossom on the 23rd inst., or ten days earlier than last year.—E. M., *Berkhamsted*.

The Celery fly.—I am sending by this post a box containing Celery stalks and a bottle of insects, and should be very pleased if you could tell me what the insect is. You will see how it attacks the Celery—entering the leaf-stalk at the bottom, and working its way up. I have never seen it before, and should like to know what it is. Nearly every plant is attacked by it.—H. R. LOVER.

* * The box containing Celery stalks and leaves duly reached me, but there was no bottle in it, so that I am sorry not to be able to name the insects it contained. The leaves were badly attacked by the Celery fly (*Tephritis onopordinis*). Cut off all the diseased leaves and burn them, and when the crop is off burn everything that remains of it and bury the surface-earth as deep as you can, for the chrysalides are formed in the earth, and when the flies leave them they will not be able to make their way to the surface through several inches of soil. If you will send another sample of the insect working in the stems I shall be pleased to name it for you.—G. S. S.

Names of fruit.—*Randell*.—1, Hawthornden; 2, Warner's King; 3, Cellini; 4, Queen.

Names of plants.—*A. T. Bowles*.—*Antennaria margaritacea*.—*North*.—1, *Escallonia macrantha*; 2, white Everlasting Pea (*Lathyrus latifolius albus*); 3, *Lobelia cardinalis*.—*J. C. L.*—*Cassia floribunda*.—*M. Attenborough*.—The White Willow or some of its varieties, which you can obtain at any of the leading tree nurseries.—*A. F. Pike*.—Dane's Blood (*Sambucus Ebulus*).—*Hibernia*.—Not *M. tripetala*. We think it is *Magnolia acuminata*.—*F. V. H.*—1, *Populus alba candicans*; 2, the Hungarian Lime probably, but should like to see better specimen.—*F. Randolph Symmons* (*Colchester*).—4, *Salvia Rozei*.—*Ginger*.—We have no knowledge of the use of a disinfectant for garden use.

BOOKS RECEIVED.

"Cultivated Roses." Illustrated by T. W. Sanders. W. H. and L. Collingridge, Aldersgate St., E.C.
"The Strawberry Manual." Laxton, Bedford.
Hulatt and Richardson, Bedford.
"Vegetables for Exhibition and Home Supplies." By E. Beckett. Simpkin, Marshall, Hamilton, Kent and Co.
"Botany for Beginners." By Ernest Evans. Macmillan and Co., Ltd.

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THE GARDEN.

No. 1455.—VOL. LVI.]

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INDEX.

(Illustrations in Italics.)

Park and Woodland:—		Aster F. W. Burbidge 274	Begonia Mrs. Leopold de .. 279	Week's Work:—		Societies:—	
Beeches in New Zealand .. 271		Carduncellus pinnatus .. 274	Bouvardias 279	Fruits, outdoor, work among .. 281		National Dahlia 29	
Fir, the Douglas 271		Chrysanthemums, early-flowering .. 273	Ceropegia Woodi 279	Kitchen garden, work in the .. 282		Royal Horticultural Society fruit show 287	
Orchard and Fruit:—		Dahlia Island Queen .. 273	Euphorbias planted out .. 279	Ferns:—		Obituary:—	
Apple Devonshire Quarrenden .. 273		Fuchsias in S.W. Scotland .. 274	Fittouias 279	Adiantum elegans 283		Martin, Jas 299	
Apple Emperor Alexander .. 273		Frost, early 273	Heliotropes, new 279	Dicksonia antarctica 283		Wallace, Dr. Alexander .. 290	
Apples, three good .. 273		Gerbera Jamesoni .. 273	Orchids:—		Ferns, specimen 282	Miscellaneous:—	
Apricot trees, lifting and replanting .. 273		Helianthus orgyalis .. 273	Barkeria elegans 280	Flower:—		Crystal Palace show, judging at the .. 278	
Cherry, the Koslov Morello .. 272		Kniphofia Nelsoni .. 273	Cypripedium amatum .. 280	Agapanthus umbellatus in the open 286		Fruit "appropriation" .. 280	
Fruit, exhibiting .. 272		Phlox Berenice 274	Cypripedium Sedeni .. 280	Asters, Victoria 284		Gunnersbury House .. 275	
Graft, a curious .. 273		Physalis Franchetti .. 274	Oncidium Harrisoni .. 280	Dahlia, pompon, at Chiswick 284		<i>Gunnersbury House, Mushroom rooms in an old wine cellar at .. 284</i>	
Peaches on back walls .. 272		Ranunculus Lyalli at home .. 274	Oncidium pubes .. 280	Flower garden notes .. 285		<i>Gunnersbury House, Nymphaea stellata at .. 277</i>	
Plum, Kirke's Black .. 273		Statice Bondwelli .. 274	Oncidium undulatum .. 280	Gentiana asclepiadea .. 287		<i>Gunnersbury House, the lake at .. 275</i>	
Raspberries, cutting back .. 272		Statice minuta .. 274	Orchids, watering .. 280	Gunnera scabra .. 283		<i>Gunnersbury House, Water Lilies at .. 286</i>	
Strawberry Leader in frames .. 273		Tropaeolum speciosum .. 274	Saccolabium giganteum .. 280	Lilium neilgherrense .. 286		Weather in W. Herts .. 290	
Strawberry Stevens' Wonder .. 273		Fruit and Vegetable Crops 277		National Dahlia Society .. 281			
Strawberries, boxing .. 273		Stove and Greenhouse:—		Pansy, Tufted, Mrs. A. H. Beadles 286			
Notes of the Week:—		Abutilons planted out .. 279	Garden Flora:—				
Apple Lady Kinloch .. 273		Begonia carinata .. 279	Anemone blanda and varieties 280				
Aster Amellus .. 274							

PARK AND WOODLAND.

THE DOUGLAS FIR.

THOUGH this is undoubtedly a fine tree, it is a much over-rated species for general planting. It makes phenomenal growth in some parts—north and south—and in others it refuses to grow and becomes a poor, stunted specimen. I do not think soil has much to do with it, but climate evidently has. The Stanley Wood of the Douglas Fir in Perthshire is a fine example of the tree's adaptability to plantation culture, the trees having grown fast and evenly and kept in fine health, but the soil is of poor quality, apparently rather wet and cold. At Dunkeld and Murthly Castle it grows equally well on a different soil, that is certainly very dry, being naturally well drained. The fact that the Larch and Douglas Fir succeed together speaks for itself, because the Larch will not thrive in a soil that is not well drained. In Norfolk, not far from East Lynn, on a dry, pebbly soil, I have seen the Douglas Fir growing beautifully, and in the New Forest there are long lines of it in splendid health. In many parts of East Yorkshire and Lincolnshire, however, the tree does not succeed, and it has been tried time after time by those who desired to get up a covert quickly. The chill east winds of spring do not seem to suit it, and where these prevail (as they do in some parts from March till June) in conjunction with a dry soil and a short rainfall, I would not advise the tree to be planted. Both the Silver and common Spruce behave very like the Douglas Fir under the same conditions. Abies mollis and Abies Nordmanniana are the only two Spruces I know of that succeed fairly well where the others will not grow. Another fault of the Douglas Fir is that it is very apt to lose its leader by the wind. In Scotland this has been found to be a serious drawback to its value as a timber tree. Nevertheless, wherever the tree will grow it is well worth planting, as probably no other Fir at present known can approach it for laying on bulk in a short time. The trees in the Stanley Wood were too thinly planted at the first, and made an enormous branch growth, producing huge knots up the trunk that detracted from

the value of the tree; but since then they have grown fast in height, being now perhaps from 60 feet to 70 feet high, though still young, with trunks of good plank diameter, and having established a complete overhead canopy, the lower branches are being regularly shed, and the bulging knots spoken of have been grown over and quite disappeared. The trunks are straight, clean and cylindrical and of the shape they ought to be where timber is the object.

As to the quality of the timber, it must be remembered that the Douglas Fir is a Spruce and the timber is soft—at least, in this country—in trees of timber size. Grown for timber, the tree would be fit for the saw-mill in from thirty-five to fifty years. Poles of pit-prop dimensions would be produced long before that, but I am speaking of trees that would produce good planks and deals from 9 inches to 12 inches or 15 inches wide. These are the sizes that consumers prefer, and those who grow the tree for timber would probably find fifty years the longest rotation period desirable. The timber of the Douglas Fir, though like that of the Spruce, is of better quality, and the heart wood of young trees has a red tint and a weight and texture that are absent in the Spruce. Wind-fallen young trees that I have seen cut up for posts were quite red inside with a broad band of white sap-wood. Age would no doubt make much difference to the quality of the wood, but in trees grown in this country the annual rings are very broad—as much as an inch in some cases. This denotes inferior quality in a Fir. Sections of trees grown in the natural habitat of the tree in Western America present a very different appearance, the annual rings being very narrow indeed and regular and the wood hard and heavy. Examples are shown in the Edinburgh Museum.

J. S. W.

BEECHES IN NEW ZEALAND.

I WAS much interested in Mr. Bean's article on "The Beeches" in your issue of April 22 last, but was surprised that no mention was made therein of any of our New Zealand Beeches. We have seven recognised species, all of which are called Birches by the colonists, the small leaves, which certainly have a greater resemblance to

those of a Birch than a Beech, having given rise to the misnomer. All over the colony where these trees are found the name Birch has been adopted, but there the unanimity of the settlers as regards nomenclature ceases, for in different parts of the colony the popular specific names are jumbled in an extraordinary fashion. For example, the Black Birch of one district is the White of another, the Red Birch is elsewhere the Black, and so on. I expressed my surprise that none were mentioned in the article, as a Tasmanian species was, and it is probable that our Beeches are harder than the Tasmanian representative. The majority, if not all, of them are harder than our Cabbage Tree (Cordylina australis), our common Flax (Phormium tenax), or our Toe-toe (Arundo conspicua), all of which I learn from your pages can be grown in parts of Great Britain and Ireland. In Devonshire, Cornwall, and the south and west of Ireland our Beeches ought to be perfectly hardy, and probably in other localities also. Here some species grow in exposed situations and in parts of the country where the frosts are severe at an altitude of considerably over 1000 feet above sea-level. The three species best known are Fagus Menziesi, which has a small leaf with serrated edges; F. Solandri, which has also a small leaf without any serrations; and F. fusca, which has a much larger serrated leaf, but though its leaf is twice the size of that of the others, it is only about an inch in length. The foliage of the two first is dark and sombre, and grows in dense masses on horizontal branches. The trees possess a striking and distinct individuality, and resemble some of the horizontal-growing Cypruses in general appearance more than any other tree I can think of. F. fusca is of a more open habit and is the tallest growing of the three; its foliage is lighter in colour, though at times its leaves are of a brownish hue. It grows in groves and forests by itself, requiring a deeper soil and more sheltered situation than the others. Such forests are totally different from the ordinary New Zealand bush, as there is little or no undergrowth, except thousands of seedlings, 99 per cent. of which must die before they attain even to the dignity of saplings. There are also few Ferns, and as the canopy is not so dense, it is therefore much lighter than in the ordinary bush. All three are evergreens, but F. fusca has a pleasing habit of putting on some autumn tints in the spring; some of the old leaves turn to varying shades of red and yellow at the time when the

young leaves are beginning to display their fresh, bright green. Owing to the small size of the leaves, the effect is only visible at a short distance, but it is a very charming and unique one. The trees are not greatly prized for timber, but the timber yielded by *F. fusca*, which is the best, is a nice clean-grained, reddish wood, suitable for indoor purposes, as it does not stand the weather. They are fairly rapid growers, about the same, probably, as their British cousin. All our timber trees are of very slow growth. I feel sure that these trees would, as I have said, prove hardy in the south of England, though in some parts they might require protection in winter till they had attained some size and vigour, and as they are handsome trees they would prove an ornament to any arboratum.

A. BATHGATE.

Dunedin, N. Z.

P.S.—More than one Mistletoe grows on our Beeches. One is very free-flowering, with a crimson-scarlet blossom, which is very effective. I once saw a mountain-side covered with Beech forest ablaze with the Mistletoe. It was a glorious sight. I have tried to introduce it on the trees in my garden, but without success. I read with much interest your various notes on the cultivation of the English Mistletoe, and shall try again if I can get the seeds, but as the plant does not grow in my neighbourhood this is difficult. I once got a few seeds of the English Mistletoe from a friend and tried them on my Apple trees, but the experiment was a failure. After reading your notes I am fired with a desire to try again, but am at a loss how to obtain the seeds, as apparently seedsmen do not deal in them. Perhaps some of your readers would be kind enough to send me a few seeds by post, and I should be happy to send some New Zealand seeds in exchange.

ORCHARD AND FRUIT GARDEN.

EXHIBITING FRUIT.

MANY will agree with "H." in the high estimate he places on fruit exhibits and his objection to the methods in some respects of staging Grapes. There is no doubt that many bunches of Grapes when exhibited would be much more attractive with the addition of some kind of trailing foliage such as the several Virginian Creepers afford, those having small foliage in particular. Vine foliage cut with stems soon withers, and, instead of adding, rather detracts from the appearance of Grapes. Placed under fruit on dishes this is not so apparent. It will, however, be a long time ere the sloping boards will be dispensed with for Grapes, because they not only form a convenient mode of carriage, but save a deal of time in staging on the morning of the show, which to a large exhibitor is most important. Sloping boards neatly covered with white or pink paper, and these draped with some suitable foliage, make good Grapes attractive. Poor quality is represented at every show in some classes and stands, and this will presumably ever remain so, and, no matter what treatment such Grapes receive in staging, they can never be made attractive. It has often struck me that if societies possessed a standard for the regulation of the size of Grape boards, the same as is done with Chrysanthemums, a much more uniform effect would be the result. The first-prize table at Shrewsbury, judged from a photographic illustration, was vastly superior to what is usually seen, but compensation in prize money accounts for much at shows. Some fruit growers are very averse to the use of any accessories in collections of fruit or Grapes. One first-class Grape grower of my acquaintance I heard commenting on the wisdom of allowing a proportion of points for decoration in the great Grape class at Shrews-

bury. He considered there were men who were good growers who would be behind on the score of points simply because they were not experts in the art of decorating. Such arguments are sure to be advanced by some, but they do not always carry weight. For this reason I very much fear "H.'s" suggestion for collections of fruit without papered boards or dishes, leaving it to exhibitors to arrange as best they can without, would not find favour among societies, exhibitors, or the public, because no uniform result would be arrived at. I take it that "H." suggests that fruit be shown on the same lines as vegetables, which are arranged on the stages, having a groundwork of Parsley or green Moss. I do not think the use of wood-wool could be made so attractive for the purpose as "H." seems to think. I certainly do not see the objection to plates being used, as they always have been, but I do think collections may be made much more attractive than they often are by trails of suitable foliage placed about among the plates, largely concealing them from view.

I am afraid "H." is not an exhibitor of fruit collections, or the advocacy of such changes in the staging would not be so prominent; the additional labour involved by such a course would be more in practice than appears superficially. In compiling schedules, too, there is often great laxity, and to clearly define the requirements set forth would, I am sure, be beyond the capacity of a good many. Schedules already are too brief in descriptive matter, and not a little confusion exists in consequence, and there are, I fear, many cases where the scope of "H.'s" views would be impossible. If an exhibitor simply contented himself with showing a collection of fruit, he would then have the time to stage, but more often than otherwise collections form only one of several classes demanding a share of time and attention. There always has been a variety of opinions bearing on the display of exhibition fruit, but "H." certainly deserves some credit in advancing what seems to be quite an original conception. Certainly it opens up a subject that is deserving of some recognition, and I hope others may be induced to give their views. The management of flower shows is often greatly at fault. Exhibitors arrive with their produce, only to find that no provision has been made for them or any calculation made as to how much space is required, notwithstanding that they have forwarded some days previous the necessary information as to the number of classes in which they are to exhibit.

W. S.

The Koslov Morello Cherry, says the *Canadian Horticulturist*, seems to be remarkably hardy. Prof. Macoun in his recent report says that in 1895-6, when Cherry trees at Ottawa were killed out generally, this variety was an exception. It was sent out by the Ontario Fruit Growers' Association in 1890, twenty-four trees having been received from Jaroslav Neimetz, Winnitza, Podolia, Russia. Only five of these have failed; the rest have borne fruit for several years.

Peaches on back walls.—When it is attempted to grow Peaches on the back wall of a vinery, failure commonly results. But I have seen almost myriads of cases where Peaches have been grown well on the back walls of Peach houses when the front trees have been trained to low, rounded trellises. That seems to be by far the most satisfactory way of utilising lean-to houses, for, whilst the front trees get ample light and air, the back trees also get plenty. Only a few days since in a Peach house of this nature in South Hants I saw the front trees on a trellis, at its highest part not exceeding 5 feet, and the

back wall trees with leaves close to the ground. As to excessive heat, that is hardly to be feared. Ample ventilation can invariably correct trouble from that source.—A. D.

Cutting back Raspberries.—"Norfolk" has raised a matter of great interest to all Raspberry growers, yet it is one on which there ought not to be two opinions. Most certainly myriads of failures have befallen amateurs and some others who, in planting their young suckers, have omitted to cut the hard woody stems back in the spring. The practice of cutting back the newly-planted suckers or canes to within 9 inches of the ground is an old one, and seems to be fully justified by long established practice and experience. When it is stated that leaving at least 2 feet-lengths of old cane, the growth which follows from its buds in the spring helps to promote root action, there is no doubt that a truism is expressed. But then, does not such root action tend to retard rather than help the production of root or sucker stolons? For it is chiefly through the agency of root suckers or stolons that new canes are produced. When we newly plant an ordinary fruit tree we know that anything which causes strong wood growth, causes also strong root growth. But in the case of Raspberries, fruits that in their habits of growth and increase differ from nearly all others, the root growth referred to by "Norfolk" may be of service to the old canes, but none at all to the new ones. These so soon as their points appear above ground practically proceed at once to cause roots to form at their own bases. For these reasons I think the old practice of cutting down newly-planted canes to cause new canes or suckers to form is the best.—A. D.

LIFTING AND REPLANTING APRICOT TREES.

IN the case of Peach and Apricot trees, and, indeed, all hardy fruits, provided the tree is not too old, excellent results may be secured by carefully lifting and relaying the roots, thus infusing new life into them. Unless the recent long-looked-for rains should have the effect of starting a secondary growth, lifting Apricot trees will be practically early this autumn. I do not advise too long delay—not even until a too yellow condition of the foliage has taken place—as often then, instead of the leaves remaining on for say a fortnight after lifting and inducing an immediate and free formation of new fibrous rootlets, they fall, and the tree does not become, as is most necessary, semi-established previous to winter setting in. Therefore I advise taking the work in hand as soon as an actual change from green to yellow is perceptible, then with care, also regular syringings until the last leaf falls, re-establishing is pretty certain by the middle of November. It is surprising what an all-round change is effected in old Apricot trees by lifting the roots up nearer the surface and replacing the old, inert compost with sweet, open loam and mortar rubble, omitting all manures, except, perhaps, a small percentage of bone-meal. Fruit tree planting on wall borders should be carried out more than it is on the piecemeal border system, as in the case of Vines, and what a saving it is where both labour and material are scarce. Where only an addition of new compost can be afforded, a certain width of the border should be marked out, a trench taken out at one end, and new soil consisting of loam, lime rubble, burnt refuse, or wood ashes, and where maiden loam is at a premium a percentage of ordinary kitchen garden soil, hitherto unimproved by fruit tree roots, thrown in and well mixed as the turning over proceeds. The soil from the Apricot border can then take the place of that brought from vegetable quarters. In such cases the lifted tree should, in the interval between lifting and planting, be laid in by the roots in some sheltered corner and kept moist overhead by the syringe. Exactly the same remarks as regards compost are applicable to young nursery or home-grown trees. The difficulty with

very shallow borders is in keeping them sufficiently moist, but I believe if these could be kept watered in dry seasons and mulched into the bargain and impoverishing vegetables kept at a distance, surface-roots, which are the most valuable, would be more numerous, trees would sooner recover from the checks often produced by inclement springs, short jointed, hard, well-ripened wood would result, and the dreaded paralysis, which ruins so many fine trees now-a-days, reduced to a minimum.

J. CRAWFORD.

Strawberry Leader in frames.—I had not a particularly good opinion of this Strawberry for forcing at first, but I saw it in good order during the present spring, and now some of the same plants that have been kept well watered since are throwing some useful fruit in frames. Some may say that Strawberries are not wanted at this end of the year, but every good gardener likes to get as much variety into his dessert as possible, and a dish of good Strawberries now is sure to please. Sir J. Paxton is also a good variety for the purpose. —H. R.

Apple Emperor Alexander.—This fine cooking Apple is one of the best for planting in proximity to the house and pleasure grounds, where, owing to the graceful habit of the tree and the prettily coloured fruit, it is always attractive. Although it looks well and is even of fair quality for eating, its very soft character will always militate a little against its coming into general market use. Yet I have sold it at a good price in the west of England, but only in limited quantities. The tree is a hardy and vigorous one, and as noted of pretty semi-pendulous habit when a few years established. —H.

Strawberry Stevens' Wonder.—This variety has probably more enemies than friends, for, early as it is, the fruits are rarely handsome. But at Hackwood Park it is a capital doer, and is largely grown for first early work; indeed, only this variety and Royal Sovereign are grown for early forcing. Mr. Bowerman likes it greatly, for with him it fruits capitally. I saw the respective plants a few days since. Royal Sovereign wore a meagre look, and seemed to need considerable time to enable crowns to be formed. Stevens' Wonder, layered at the same time, showed on every plant a fine head of leafage and stout crowns. No plants I have seen anywhere looked so well. It was easy to perceive that it is at Hackwood a first-rate forcer. —A.

Boxing Strawberries.—Not at all a novel, but still now a somewhat unusual, plan in the forcing of Strawberry plants is that adopted at Greenham Lodge, Newbury, by Mr. Dalby, who layers all his runners for forcing into boxes of stout inch wood 5 feet long, 8½ inches wide, and 5½ inches deep inside. He has some fifty of these boxes all filled with Royal Sovereign, and each one contains sixteen strong-rooted layers. These plants were generally stronger than others in pots, not having suffered so much from the heat and drought. Practically they need less attention, as one watering will usually serve a box for three days. They are stood on shelves in a low span-roofed house, being brought in in batches, and the plants give heavy crops. No plants in pots for forcing are there grown. —D.

Three good Apples.—I saw just recently at Forde Abbey, Chard, bush trees of Domino and Stone's Pippin carrying for their size truly wonderful crops of fine clear fruits that were perfect pictures, and well merited illustrating. Domino is a hardier early Apple than Lord Sutherland and is a free cropper. The fruits are clear, semi-conical, and carry a profuse bloom. Stone's Pippin is well known, and in this case the crop was a grand one. The third Apple was the still better-known Lane's Prince Albert. This I saw in several gardens fruiting freely, but nowhere so markedly as at Hackwood Park, where on a couple of espaliers 4 feet high and about 10 feet long there was the other day a splendid crop of superb samples. What a fortune should this grand Apple furnish were it generally

grown in bulk in this espalier form, for it adapts itself to such training admirably. —A. D.

A CURIOUS GRAFT.

THREE years ago a M. Dardar, of Brouvaux, near Metz, brought to notice a Medlar more than 100 years old, grafted on a Hawthorn. Directly below the graft the stock (White Thorn) gave birth to a branch (which we will call No. 1), intermediate in form between the Hawthorn and the Medlar (*Mespilus germanica*), yet approaching more nearly to the latter than to the Hawthorn. This branch differs from the grafted part of the tree, that is to say the true Medlar, in being thorny, and, in lieu of single flowers, these are borne in corymbs of as many as twelve. The fruit (Medlars) are small and generally very much flattened. Side by side with this branch and springing from the same point of insertion, another has developed of completely different form (No. 2), the young leaves of which are lobed, velvety, and shaped like those of the White Thorn; the full-grown leaves, on the contrary, are little or not at all lobed, are long in shape, and, in fine, bear a certain resemblance to those of the Medlar. The young shoots are downy, the flowers in corymbs almost similar to those of the White Thorn, but somewhat larger, and the calyx pubescent. Two years ago these flowers were roseate in colour, sometimes also the rose-coloured petals alternated with white petals. This year there have been only white blooms, though it is true I only saw them at their decline, which may explain the apparent change of colour. The fruits of No. 2 are long, brown, smaller and quite different from the true Medlar. The same tree has also produced, likewise below the graft, another very remarkable branch (No. 3). The base of this branch is none other than the White Thorn, but the extremity is transformed into a branch which, if not exactly similar to No. 2, bears a very close resemblance to it. This third form, unfortunately, now only exists on the mother stem in a withered state. Possibly I cut this branch a little too short in taking branches to graft. Fortunately, however, the grafts have taken very well, so that I am enabled to study this form. This year I made two new discoveries not hitherto observed. Form No. 1 has given birth to a young branch, which is the true single-flowered Medlar. On the same branch a forked twig at a slight distance from its point of insertion has produced on one side an inflorescence of White Thorn and on the other a corymb of eight Medlar flowers.

What ought one to conclude from this extraordinary disjunction? In my opinion all these changes are without doubt due to the influence of the graft (the Medlar) on the stock (the White Thorn). The intervening forms which have sprung from it, and of which we possess vigorous two-year-old plants fixed by the graft, logically can only be called hybrids. But if this description ought to be applied to them it will be necessary in botanical treatises to rectify the definition of the term and to distinguish between the different sorts of hybrids, viz. (1) those obtained by sowing, and (2) those got by grafting. —ED. JOUIN, in *Le Jardin*.

Plum Kirke's Black.—This is a Plum that has given very excellent results this season, and for the matter of that it generally does, as it is but seldom that it fails to bear. This season, however, when the Plum crop is not so satisfactory generally as it might be this fact is worth recording, as it shows that the variety under notice possesses a good constitution, and is to a very great extent capable of resisting the effects of the great diversity of weather usually experienced at the season when Plums are in blossom. It is also a variety that does exceedingly well on a wall either having a northern or north-western aspect. Bush trees also bear well, and I have seen it stated that it is quite as prolific when grown as a standard. Under good culture the fruits grow to a large size on wall trees, and when

fully ripe and covered, as they usually are, with a very dense bloom they are then strikingly handsome, and form a fine dish for the dessert. The fruits when partaken of are invariably found to be quite as good as they look, the flesh proving to be both tender and juicy and very richly flavoured. —A. W.

Apple Devonshire Quarrenden.—On the trees this has a very pretty appearance, and it is one of the most useful of early Apples on a suitable soil. Unlike many other kinds it colours well even in cold and heavy soils, while in sheltered places it comes very early. In a Huntingdon garden recently I noticed a fine tree well loaded, the only one in the garden, in fact, that was bearing a crop. At another place in the midlands its showy fruit stood out conspicuously from all others, and it is a pity it is not much more grown. To help with the dessert at this time of year it is excellent, though the flavour is not, of course, up to the standard of later kinds. Many people like the soft rather sweet flesh of these early kinds, and to such this variety will appeal. It is strictly hardy and free-bearing, does well on any stock or under any form of training, but best of all on bush and free pyramid trees. In the west of England it is a very favourite kind, and in Gloucester, Somerset and Devon may be met with in almost every cottage garden, many of the cottagers making a good percentage of their rents out of their "Quarantines." —H. R.

NOTES OF THE WEEK.

Dahlia Island Queen is perhaps among the most beautiful of this fine race. It is a Cactus kind, with flowers of an exceptional shade of delicate mauve. The kinds in this particular line of colour are by no means numerous, so that it stands out quite prominent among the best of these flowers.

Helianthus orgyalis.—Perhaps the most striking feature of this plant is not the great size of the flower-heads, but the reverse, for it is indeed one of the smallest in this respect. The elegant and graceful habit and the well-recurved linear leaves are items that make its presence in the garden as welcome as it is distinct and beautiful.

Kniphofia Nelsoni.—Can any reader of THE GARDEN say if there are early and late-flowering forms of this fine plant? A year or two since I planted a nicely established example of it, but it appears destined to be a late-flowering variety of this beautiful Torch Lily. Not that lateness would be any drawback, but many spikes appear too late to admit of full development. —E. J.

Gerbera Jamesoni.—At the last Drill Hall meeting the Messrs. Wallace, Colchester, had flowers of this fine plant. The brilliant colour of the ray florets and the large size of the flower-heads make this a really handsome subject. The flowers are borne on single stems, and, when sufficiently plentiful, should make a most telling subject in decoration, and under artificial light in particular.

Early frost.—On the morning of the 29th ult. quite a sharp frost was experienced in this district (West Middlesex), Vegetable Marrows and the more tender things suffering here and there. Late in the afternoon of the previous day some rain fell, this leaving vegetation generally quite wet and easily affected by frost. To this is due the fact that some fully expanded flowers of Chrysanthemums were quite spoiled.

Apple Lady Kinloch.—A slight error appears in last week's GARDEN in referring to Apple Lady Kinloch sent from here to the Drill Hall meeting on Tuesday. It is there stated that this variety originated here, instead of which the raiser was Mr. John Brunton, Gilmerton, East Lothian, who placed the stock in charge of Messrs. D. B. Laird and Son, Edinburgh, for distribution. This firm sent a plant here for trial a few years ago, and the fruit shown was grown upon that plant. —JAMES DAY, *Gilmorey House, Gartiestown, N.B.*

Early or summer-flowering Chrysanthemums.—These showy and useful subjects were greatly in need of the rain, but which, however, has come too late for the earliest bloom. Only the other day some plants of these in variety were drooping just as badly.

as though exposed to the great heat of summer, demonstrating how exceedingly dry they were at the root. Indeed, even now where the plants have not been watered the soil is dust-dry an inch from the surface. In the meantime, however, the plants are refreshed and should give a nice display if the weather remains favourable.

Statice Bondwelli.—Yellow or shades approaching this are very rare in this genus, so that the present plant is unique, having flowers of a good brimstone-yellow shade that with age become somewhat paler. The plant is an annual, and the distinctly forked inflorescence is very striking. The main branches of the inflorescence are slightly angled, the branchlets merging from a simple attenuated stem to an acutely triangular form, the blossoms appearing in considerable profusion at the tips. *S. sinensis* is said to have yellow flowers. The above, however, on the testimony of Messrs. Wallace, Colchester, forms a free-flowering bush, very pretty by reason of its distinct colour.

Aster Amellus.—A word of warning may not be altogether out of place respecting this and the variations obtainable when raising plants from seed. As a matter of fact, scarcely any two of these are alike, and it needs a note of warning to prevent quite a host of these with their minor variations being saddled with distinctive names. It is always advisable to raise seedlings of such things, though up to the present time very few that we have seen have surpassed the original in point of colour or freedom. One of the finest is named *Riverslea*. Already, however, there are spurious forms in the market with this name attached. This is unfortunate, as the colour of the true plant is so distinct, while in habit it is but a counterpart of the type.

Physalis Franchetti.—It is, of course, as an autumn plant that this is valuable, when the abundance of its richly coloured calyces renders it one of the most striking plants in the garden. The plant is in every way superior to the older species, *P. Alkekengi*; indeed, in leafage alone it is a gain upon the old sort. With good treatment and early planting some very decided effects may be secured. Not that this should be construed to imply tenderness on the part of the plant; rather is it perennial and one of a somewhat persistent type. At the same time, the inclination of its roots to travel may sometimes leave a gap where no such gap was intended, and by transplanting each year this may be avoided. Just now the plant is very fine, and if dwarfer than we have before seen it, there is no lack of brilliant colour.

Aster F. W. Burbidge.—If I recollect aright, I sent to THE GARDEN a short note about this *Michaëlas Daisy* in the autumn of 1898. My only plant has now attained larger proportions, so that I can now more fully understand its worth. The high opinion I formed of it before has not been lessened, but rather increased, by longer acquaintance and by the finer appearance presented by the larger plant. It is of sturdy habit, has strong stems, and grows in this light soil about 5 feet high. The individual blooms are large and of a fine colour. I see them described as being of a fine soft heliotrope, and it is not easy to suggest an alternative description more suitable. There is about the flowers in certain conditions of the atmosphere a warm rosy tint which is quite attractive. *Aster F. W. Burbidge* comes into bloom with me early in September, and will, to all appearance, last well through October. —S. ARNOTT.

Statice minuta.—While one cannot claim for this tiny Sea Lavender that it possesses either the elegance or the usefulness for cutting of its taller congeners, it has some features which will commend it to at least a few. Its principal claim upon our notice is, however, one which many will not recognise as such. It consists in its miniature size, a grievous defect to those who like showy flowers, but a high recommendation to those who delight in the smaller gems of the alpine garden. There has, to all appearance, been some confusion in the names of these very dwarf *Statice*s, but there does not seem much reason to

doubt the name of the little plant now in my garden under the name of *Statice minuta*. It grows only some 4 inches or 5 inches in height, has small leaves almost spoon-shaped, and stiff spikes of flowers of almost a lavender colour. Small and unassuming as is this *Statice*, room should be found for it in the rock garden. —S. A.

Phlox Berenice.—The favour generally accorded to white flowers is shared by white *Phloxes*. In these there has been a considerable advance of late years. This has largely consisted in the size of the individual flowers and in the greater purity and substance they show. It seems only a short time since *Panama* attracted the notice of admirers of these fine autumn flowers. It, however, is not easy to obtain in good form. Fine as the individual pips may be, the spike is usually poor in comparison with that of some of the older whites. In the one named *Sylphide* we have, however, a considerable improvement. It is beautiful from almost every point of view with its white flowers, its wax-like texture, and its good spike. In *Berenice*, which was shown at Edinburgh show by Mr. Forbes, of Hawick, we have what promises to be another acquisition. Unless I am mistaken, it also is from the same continental source which has of late years given us so many beautiful florist's flowers. Among the newer *Phloxes* there are still some which fall short of the best of the older varieties in the form of their spikes, but one can observe an improvement in this respect also. —S. A.

Carduncellus pinnatus.—This pretty little alpine plant is giving a second crop of bloom at present. One says crop with some reserve, as the flowers are, perhaps, not so freely produced as to justify the term, which carries with it the idea of a number of blooms. It does not seem at best a plant which will at any time give many flowers, yet it is one which is uncommon enough and pretty enough to be a favourite. It has been growing on a rather dry rockery here for fully three years, but I have an idea that it would flower more freely if in a place where it would have more moisture at the root. One of the beauties of *Carduncellus pinnatus* consists in its exceedingly neat habit, which makes it of high value among the dwarfest of the rock garden plants. It forms a nice tuft of pinnate leaves, each about 3 inches long and of a rather deep green colour. From the centre of each tuft is produced one solitary, almost stemless, flower. This is rather like a small flower of *Centaurea montana*, but with the florets differently arranged. The flowers of this *Carduncellus* are of a light purplish blue. The only information accessible regarding the native home of this plant is the somewhat unsatisfactory statement that it comes from the East. —S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Tropæolum speciosum.—This brilliant creeper is not so easy to establish in some Scottish gardens, and your correspondent "Delta" will find that a good many readers north of the Tweed can appreciate the difficulties experienced in establishing it in the south. I know of gardens in which it has been tried many times, with the invariable result that it has failed to flourish even when a season's growth had given hope that it had established itself. I have in view a garden where it has been planted several times. More than once it has attained several feet in height, but failed to come up the following year. One season it was over 7 feet high, yet the following year not a vestige of it was visible. In moist districts it is much easier to establish than in those where the rainfall is less, but it is altogether a plant difficult to fairly establish, and one, too, which has a great dislike to disturbance. I can remember a house which was for many years the admiration of all passers-by on account of the way it was covered with the brilliantly coloured wreaths of flower of this *Tropæolum*. The house changed tenants, the one who left removing, as far as possible, every bit of *T. speciosum*. The new tenant obtained a number of roots in the same neighbourhood, where it

grows luxuriantly. Some years have elapsed, yet the *Tropæolum* has never fairly got hold, and is still weakly and far from being as fine as before. Anyone who has felt the difficulty of establishing the plant can thoroughly sympathise with the spirit of rejoicing of which your esteemed correspondent "Delta" speaks. —S. ARNOTT.

Fuchsias in S.W. Scotland.—Although the climate of Cornwall is very different from that in this corner of Scotland, and, indeed, almost all the west coast, many might profit by the pleasant notes on "Cornish Gardens" in THE GARDEN of September 30. I know of gardens where the Myrtle lives and flowers against a wall, and such places as Poltalloch and Inverewe could give us many lessons. What one would, however, like to draw from the note by "S. W. F." is a hint of the desirability of more attention being paid to the *Fuchsias*. With us there are good bushes of *Fuchsias* which have no protection in winter, but escape unscathed, save the loss of their leaves and tender twigs, in all but the most severe winters. Even in such record seasons as the winter of 1894-95 these were only killed to the ground and started again from the base. For some years I have had under observation in a cottage flower border facing south a *Fuchsia* with white perianth and purple corolla. It is not a vigorous grower and never attains more than to about 3½ feet high. It is perfectly hardy in the garden in question, which, although facing the south and close to the sea, is yet pretty much exposed. I do not know the variety, but it is not too much to assume, I think, that others of similar colour might succeed as well. In my own garden for the last two winters I have grown without any protection one of M. Lemoine's hybrids of *F. myrtifolia*. I saw a few of these at Newry, where they are hardy, and afterwards obtained as an experiment the one called *Bouquet*. It is a dwarf-growing little *Fuchsia*, such as growers of alpinists would appreciate, and one with which I have been much pleased. I have not given it any covering. —S. ARNOTT.

Ranunculus Lyalli at home.—As Mr. Arnott truly says, "the establishment of so fine a plant as *Ranunculus Lyalli* is worth a good deal of trouble," and as reliable information concerning it seems of the vaguest description, it may be of interest to him and other growers ambitious of succeeding with it in the Old Country to relate my personal observation of it in its own native wilds. There it flowers during the months of December and early January. I saw great groups of it growing on the top of Arthur's Pass, on the way to the entrance of the far-famed Otira Gorge, on the West Coast Road, Middle Island, New Zealand. At such an altitude all vegetation was naturally sparse, especially when compared with the luxuriant growth of the bush running riot lower down. The Mountain Lily was a conspicuous object in the nooks and depressions on the otherwise somewhat level ground on either side of the coach road on the summit of the Pass. The plants grew in the open, their large leaves overtopping the coarse grass and smaller herbage that surrounded their roots. It also appeared to grow in somewhat marshy situations, though, as the rainfall on the West Coast Road is proverbial for its persistence at all times of the year, this conclusion may have been perhaps too hasty. From his own long personal experience, our driver told us at this elevation the cold during the winter months was intense, though he could give us no approximate idea of the average temperature at that season. The ground on which the *Ranunculus Lyalli* grew was not remarkably stony, though rocks lay scattered about the locality much as they do on any ordinary moorland. I am almost sure this *Ranunculus* is not an annual, as I was shown some fine plants of it growing in the little garden of a Scotchwoman, hostess at one of the rest-houses at which we put up for the night. There I was informed the Shepherd's Lily, or Mountain Lily (as the colonials call it), thrived as well in the valley below as in its native haunts on the heights above. —E. W.

GUNNERSBURY HOUSE.

In the pretty and well-kept gardens that surround Gunnersbury House a particular phase of gardening is in favour, and the most casual observer will not be long in deciding for himself after having once seen them what the chief aim and desire of the owner, Mr. Leopold de Rothschild, are. Indeed, it is obvious on every hand. The very naturalness of everything as opposed to the stiff and the formal fully demonstrates that the one desire has been not garish beds of this or that at every turn, but the careful avoidance of these, and in place thereof groups of this or that. This is perhaps most apparent in the vicinity of the pond. The meeting of grass, Sedge, Rush and water is all so much a bit of Nature, that one

view. To this end Mr. Hudson, the gardener, has devoted considerable space this season to the more showy

HARDY BORDER PLANTS,

and right well has he succeeded in making a display of these things. That this much has been accomplished in what has undoubtedly been one of the worst seasons for freshly-planted subjects only tends to show the care that has been bestowed on this fine border and its occupants. The border is of semi-circular outline, and is 5 yards wide and 70 yards long, figures that show that a great number of plants of varying sizes would be needful to fill it to advantage. It was quite early in September when I had an opportunity of seeing this border. The plants are not arranged to form

sort of surprise when in full view from the front. The idea is good, not merely for the reason just stated, but because a partial shade-loving plant may be introduced and used to advantage. In just this way a lovely group of *Lobelia Carmine Gem* was obscured from view till one faced the plant, which, however, was no solitary one, but a fine mass in splendid flower. No finer addition has been made to the hardy *Lobelias* during recent years, and as a good early autumn perennial it has much to recommend it. Some of the finest tall-growing perennials were to be seen in this border. Among them *Helianthus orgyalis*, *H. Miss Mellish*, the several forms of *H. multiflorus*, and among them the true *H. multiflorus major*, which is not often seen, being generally con-

fused with *H. m. maximus*, from which it is distinct. The kind mentioned is nearly 2 feet taller than the ordinary *H. multiflorus*, which in full flower only a short distance away afforded a good contrast. *Pyrethrum uliginosum*, *Helenium autumnale superbum*, *H. nudiflorum*, the taller *Michaelmas Daisies*, such as *Robert Parker*, the *Novae Angliæ* forms, *W. Bowman*, and others, were all in fine masses. A splendid mass, too, of *Rudbeckia Golden Glow* was teeming with flowers. Here, however, in spite of fine vigour and excellent colour, the plant had rather weakly foot-stalks. All the same, the effect was very good amid so much that was quite erect. Other striking objects not perennial in character were pillars of *Convolvulus major*, the silvery *Polygonum tomentosum*, which provides a fine leaf effect not merely in its boldness, but equally in the colour. *P. orientale* is also a fine tall subject. Among things of more medium height the most noticeable were masses of Japanese



The lake at Gunnersbury House. From a photograph by Geo. Champion.

is struck by the very likeness and similarity. How very different this pond would appear with its wealth of lovely Lilies had it been formally treated and given over to the mason. Another very charming as well as secluded spot leads from the terrace, and may be styled a Rose garden, for Roses largely abound, and then at one end of this almost everything employed is fragrant to a certain extent. Beds of *Heliotrope* and *Humeas*, with others of *Bouvardias*, make this sheltered and secluded spot a most pleasant and enjoyable one. It is more particularly during the late summer and autumn that this garden is at its best, for the family are then in residence. Hence no trouble is considered too great to attain the object in

one sloping bank of blossoms for reasons of effect; indeed, had the height of each plant been strictly observed, the whole border would have simply resolved itself into a series of half circular lines, with the tallest things behind and the shorter ones in front. Happily, this was avoided with the best results. The arrangement, therefore, while adhering to no strict method, is something after this sort. A group, say, of some tall-growing plant, *e.g.*, any of the perennial Sunflowers, while fully occupying the background would here and there extend as a sort of promontory to the front, and thus form a panel or recess for a much shorter group of things that was not visible in the distance, and therefore created a

Anemones in white and coloured kinds and the fine *Heliopsis Pitcheriana* with golden orange flower-heads. This is a fine subject for August and September flowering, yet it is rarely that justice is done to it. Whether this is due to its smaller flower-heads or not is a question; still it is so distinct in the Sunflower family, that it should be grown well and liberally where effect is desired at this season. *Boltonia asteroides*, groups of *Cannas*, *Aster laevis formosissimus*, and a very fine late Torch Lily, *Kniphofia R. C. Affourtit*, a seedling from *K. corallina*, were also effective. One or two good *Phloxes* only were used, as the majority of these are too early flowering to suit the case. Those employed are *Jeanne d'Arc*, white;

Coquelicot, cerise; and Miss Pemberton, a large-flowered carmine variety. Another year, however, these will be tried on another plan with a view if possible to retard their blooming. Again in masses occurred the Montbretias, Rudbeckia Newmani, the pretty Goldilock (Aster (Chrysocoma) Linosyris), the purple Clary, Salvia Horminum, Physalis Franchetti, Chrysanthemum frutescens, Kniphofia Nelsoni, Aster Thomsoni, A. ericoides, A. cordifolius, A. Mrs. W. Peters, A. Amellus and its vars., Gaillardia Vivian Gray, a soft yellow kind, which also possesses a disc of the same uniform colour, a few Balsams and a margin of dwarf Snapdragons completing the more important things at the moment. Several feet of a grass verge occupy the foreground, and the effect is not lost upon the border. At the back is a veritable fence of Cactus Dahlias, that not only forms a most perfect floral screen, but here and there as seen through this border of flowers is helpful by reason of the fine array of colour. Sheaves of bloom are taken from this flower fence. This border is no doubt one of the most satisfactory and still one of the least formal we have seen. That it serves the purpose for which it was intended there is no doubt; it does more than this, for it proves how much may be accomplished in a single year by the judicious blending together of the best the season provides.

PLANTS FOR THE TERRACE.

Leaving the border, the main terrace intercepts the lawn and the gardens beyond. On the terrace specimen Pomegranates (*Punica Granatum*) have this year given a rich display of flowers of almost solid wax-like substance, the brilliant colour alone forming a considerable attraction. The handsome bushes of the sweet-scented Verbena and the splendid bushes of Myrtles, both of which have been raised from cuttings by Mr. Hudson, also flower very freely, and promise to carry it on for weeks to come. Then close by is that probably unique collection of fragrant Pelargoniums, many growing quite naturally in large pots and others trained in huge fan-shaped outline to afford a special screen in a town garden in London. No garish bedding breaks the lawn here, but on either hand fine trees provide a welcome shade, and beds of bulbous-flowering and other plants abound. It is here, too, that one notes in such abundance the several forms of the Lilies of the *L. speciosum* group, not over-massed to form a vulgar array of colour, but grouped, some with Bamboos, others with the varied kinds of Japanese Maples that display a pretty effect with many diverse tints; others, too, with the ever-welcome La France Rose flowering freely together, in which case the white *L. s. Kretzeri* was the chosen companion, while in another this same variety with *L. auratum* mingled with *Acers* in very pretty fashion. Another large Lily group was composed of the Cape-grown *L. Harrisii*, which was flowering finely in a bed of *Veronica* as a foreground to larger shrubs and things behind. Nor can one pass over a notable specimen of the well-known *Catalpa*, on which hung in the greatest profusion its clusters of long Bean-like fruiting pods, pods that almost compare with the more tropical *Vanilla* in form than aught else. It was here, too, that the pretty masses of *Cyclamen hederifolium* made so charming a picture, and though not long planted, and therefore not fully established, promise a still better display in the future.

THE HYBRID WATER LILIES

are important; indeed, of recent years much interest has been taken in these things at Gun-

nersbury House; and to remember that all the beauty this water garden represents is so little removed from London should go not a little way to encourage others who have water at hand to try and produce similar results. It is not a huge or costly lake that is required to grow these plants, for quite a large number may be grown in a small space, and their exquisite flowers are indeed no little gain to any garden. Nor is it only the water and the Water Lilies at Gunnersbury that make the whole thing so purely natural, for the very approaches and the margin of the pond or lake afford a well-marked lesson. Of the Lilies themselves a few words must suffice, for they are now a large and interesting throng and number at least some three dozen kinds; indeed, all that are good and procurable. For the summer and autumn months these things provide a touch of colour that has long been needed in the garden, and now the want is supplied the desire for more will grow apace. Water without water plants not infrequently becomes a neglected area, and sometimes an unsightly one too, but with a few good plants introduced follows the desire of watchfulness and care to do them justice. As may be gathered from the accompanying pictures, the water space at Gunnersbury is considerable, and many of the plants are now of fine proportions. This, indeed, is the most encouraging part, seeing the short time that has elapsed since their introduction. Now it is easy to count a score or more of buds from a single plant—a plant, by the way, that four or five years ago would have been easily put into the waistcoat pocket. A few of the more important of these *Nymphaeas* are *N. Marliacea alba*, *N. M. carnea*, and *N. M. Chromatella*, while the higher coloured kinds may be mentioned, as *N. M. flammea*, *N. ignea*, and *N. sanguinea*. In the odorata group, the lovely *N. o. exquisita*, *N. o. rosea*, and *N. o. sulphurea grandiflora* are fine. Other good things are *N. Laydekeri fulgens*, *N. L. rosea*, &c., while such as *N. Ellisiana*, *N. gloriosa*, and *N. lucida* are plants alone of very decisive hues. A pretty miniature kind, *N. pygmaea Helvola*, is among the daintiest of all this tribe. Here they flourish one and all with that vigour and freedom that were for long regarded only as the inheritance of the well-known white Water Lily, *Nymphaea alba*. It will be in keeping here, before leaving this group, to mention the lovely *Nymphaea stellata*, which is also a feature here. This, too, is well shown in the picture, but it is not grown in the lake with other kinds, but in a tank adjacent to one of the greenhouses, where a return pipe passing through just suffices to warm the water in the early days of the year and through winter. All the summer long this lovely plant sends up its splendid flowers well out of the water on long petioles that render it most welcome in decoration. The tank is, perhaps, 6 feet or 8 feet long and about 5 feet wide, and here scores of blossoms appear in the wildest profusion, often as many as twenty being taken at a single cutting. Through the winter months a spare frame covers the tank, and thus with very little trouble this fine blue Water Lily yields almost unceasingly of its flowers. It is assuredly a kind which no garden should be without even for the colour it affords, if nothing more. On the opposite side of the lake from the mansion is

THE BAMBOO GARDEN,

though Bamboos really encircle another side also. In the Bamboo garden, which is a series of beds of these things, a great number are being tried, and though established and growing well, as indicated by many freshly formed

shoots, the plants are yet lacking their true character, and for the moment may be thus briefly disposed of. There are, however, one or two notable exceptions—*Phyllostachys nigra*, for example, which here is not only one of the hardiest and most free-growing, but also one of the most elegant in plumage. Already has this fine example endured 24° of frost, and the plant still grows apace, each year's growth being stronger than before. But even now the finest growth must be nearly 10 feet high, and, though not erect, is of the most graceful bearing. There is also a gigantic example of *Bambusa Metake*, which grows in close proximity to the water's edge. *Arundo Donax macrophylla* (syn., *A. D. glaucescens*), recently certificated at the Drill Hall, is here also, and quite distinct from the old kind. No mention of these gardens would, perhaps, be complete without a reference to the

FRUIT DEPARTMENT UNDER GLASS.

How well Mr. Hudson excels in this particular is well known, and visitors to recent Temple shows will not have forgotten the fine and varied displays that have been made on these occasions. And what is true of the earliest forcing kinds is equally so of the latest that can be obtained, and the best of Plums and Pears for late dessert are grown here in very considerable quantity. Of the former, Golden Esperen, Golden and Late Transparent, Ickworth Impératrice, Coe's Golden Drop, Grand Duke, Late Rivers, &c., form the bulk, the trees, all of which are in pots, bearing good crops. In a private garden such as this so large a number of pot trees is no inconsiderable item, and as the entire batch is repotted each year the care for the trees is constant. The early trees were in the open and dripping with their usual evening bath. Figs, too, are a feature here, some four houses alone being utilised by these. Negro Largo, Nebian, and Bourjasotte Grise are those grown, the last taking the palm for flavour. It is in one of these Fig houses in the full light suspended near the glass that Mr. Hudson succeeds so well with *Dendrobium formosum giganteum*. Some of the plants are now in their fifth year as cultivated examples, and each succeeding year the pseudo-bulbs are stronger. The plants, indeed, are in the finest condition and progress everywhere apparent. Some hundreds of flower-buds and blossoms alone demonstrate not merely the worth of the kind, but how well the treatment suits the plants. For late supplies, a fine house of Melons was planted on July 4, and in eight weeks from that date some of the earliest were approaching ripeness. There are nearly forty plants in the house, the scarlet-fleshed varieties only being cultivated. The house itself is a span-roofed structure, lofty and wide, the vines and foliage extending several feet beyond the fruits, an item which doubtless conduces to flavour as opposed to the more restricted practice that sometimes obtains. The vineries also had their complement of the fruit, the good crops that were apparent bearing evidence of good culture, while the perfect freedom from spider, in spite of hot weather, was alone remarkable. Peaches, Nectarines, and Strawberries, a large number of which are alpine, are grown here in quantity. Still one more department, and this

THE MUSHROOM HOUSE,

or rather cellar, for it is indeed an old wine cellar which is thus converted into such excellent use. The beds are in the arched recesses and have a surface of about 100 feet. In all there are nine of these compartments, and from early in autumn one bed is made and spawned

each fortnight. The spawning takes place when the thermometer is at 85° with a downward tendency. The beds are about 1 foot thick of the materials used, the earliest being only recently spawned, with others in course of preparation. The accompanying photograph will better convey an idea of the success achieved than any description. The cellar is very convenient for the intake of the needful materials, and being lighted by electricity may be regarded as well up to date in these matters. What strikes the visitor most forcibly perhaps is the uniform condition of the inside temperature; indeed, this alone is sufficient to ensure success in the culture of this much-esteemed edible, and failures seldom occur.

The foregoing are the most important departments in this compact and well-kept garden, yet the variety is so great that many important things are of necessity passed over altogether or only lightly touched upon. But in all, one impression remains, that the good and beautiful are the things chosen to adorn this garden and give it as much a touch of Nature as is possible with situation and environment. E. J.

FRUIT AND VEGETABLE CROPS.

SCOTLAND.

Balcarras Gardens, Fife.—The fruit crops in this district are very good, but ten days late. Apples, Plums and Cherries were abundant, but Pears, Peaches and Apricots are scarce. Small fruits are extra good. Strawberries have been plentiful, but small. Raspberries are very good. All fruit trees are vigorous and free from aphids. Vegetables are very late.—E. TATE.

Brechin Castle, Forfar.—The season has been very much against early crops. There was little growth during April, and indeed it was only in the beginning of June that we began to have genial weather. Onions were very late in starting, but are now making good progress. They are healthy and have not been troubled with the maggot. Carrots also look well, as they generally do here on specially prepared ground. Peas did well. Potatoes, like everything else, are late, but have a good appearance. Early varieties are coming in, but the quality is not so good as it generally is, owing to the wet weather. As yet I have seen no appearance of disease.—W. McDOWALL.

Eastwood Park, Renfrew.—In spite of the cold, wet spring and late frosts, all small fruits in this neighbourhood, with the exception of Gooseberries, are a fair average crop of good quality. Strawberries, though very much below last year, have on the whole given very satisfactory results. Vicomtesse Hericart de Thury and Elton Pine are the kinds which have done best here. In some gardens Royal Sovereign has done well. Apples are very much below the average. The trees were late in coming into blossom and escaped the late frosts, but the spell of hot, dry weather we had when they were in flower, which brought so many insect pests along with it, is, I think, accountable for the comparative failure of this crop.

Up till the present time vegetables in this neighbourhood have been very scarce. Autumn-planted Cabbages looked promising up till the beginning of February, but the severe check they received at that time made 80 per cent. bolt. Early-planted Cauliflowers went off badly with maggot. Young Turnip plants could not get into their rough leaf, owing to attacks of the Turnip fly. Late Brassicas of all kinds were difficult to get up to the planting stage; seedlings pricked into nursery beds when ready for planting were found to be so badly infested with maggot as to be almost useless. Early Peas have been almost a failure, Chelsea Gem being the only kind that has given satisfaction. Midseason sowings are little better, old reliable kinds being

almost worthless; later sowings are more promising.—W. HUTCHINSON.

Callendar Park Gardens, Falkirk.—Fruit crops in general are very thin, owing to the late frost we had here. With the exception of Pears and Raspberries, all other fruits are below the average.

The vegetable crops are fully a month later this year, but everything is promising well for good returns. Early Potatoes have been very poor owing to the heavy rain in the early season. Garden pests are very plentiful on everything.—THOMAS BOYD.

Taymouth Castle.—Fruit prospects in this district are fairly good. Bush fruit is plentiful and of good quality except Black Currants, which are only moderate in crop, and I hear complaints of Gooseberries being poor in places. Strawberries were a grand crop. Raspberries were good. Apples are an average crop and trees clean. Plums are scarce, except Victoria. Early Pears are fairly good, but later ones nearly all dropped. Cherries are good, Morello and Kentish especially so. Insect pests on fruit trees have given less trouble than usual this year.

Vegetables of all kinds are very late. Potatoes are good, at least the early ones; late ones promise well. Peas were very good. Cauliflower was late in coming into use. The earliest Turnips were good, but the successional sowings have been more or less failures owing to the fly, which attacked them badly during the dry spell at the end of May to the middle of June. Farmers in



Nymphaea stellata in the open air at Gunnersbury House.

this district had to sow afresh in many cases, so badly were they eaten.—WM. WRIGHT.

Haddo House, Aberdeen.—The fruit crops in general are poor. Apples, Pears, Plums, and Cherries had a most abundant blossom, but set badly and are a very poor crop, except a few Apple trees on walls and some Victoria Plums. Two or three May Duke Cherries have a fair crop; Morellos are almost a complete failure. Small fruits are also below the average. Strawberries, except on young plants, are poor. Gooseberries are a fair crop, also Red Currants. Black Currants are not half a crop. Raspberries are abundant.

Vegetable crops are fairly good, though late. The dry, hard weather in the end of May and greater part of June was very trying to any crops newly sown or planted, but since the rain came they are doing well and give promise of a full crop. Potatoes especially are vigorous and healthy. Early sorts are a fair crop and of good quality.—J. FORREST.

Dunrobin Gardens, Sutherland.—Apples, Pears, and Plums are the worst crop we have had for many years. During May we had a good deal of rain, with cold winds and occasional frosty nights, followed in the early part of June with about a fortnight of burning sun and drought. The crops of the above fruits are almost nil on

most of the trees. The only exception appears to be the old Keswick Coddlin, which has a fair sprinkling on some trees. Small fruits, fortunately, are mostly a fair average, Gooseberries under, and Strawberries rather over average. Cherries are a thinner crop than usual.

Vegetables of all kinds are good, but somewhat later than usual. Potatoes particularly are ten days to a fortnight later. The drought of the early part of June has been succeeded by a wet time. Out of the twenty-eight days from June 18 to July 15 rain has fallen more or less on twenty days, amounting to 3.69 inches. Comparatively little damage has been done by Onion or Carrot grub.—D. MELVILLE.

Cullen House, Cullen.—The wood of Peach trees was badly ripened last year, therefore the blossom was scarce. Apricots were much the same, and, owing to the continuous cold and frost during the flowering season, the crop is practically nil. The cold, cutting winds much affected the growth of the trees, and the foliage was very much blistered. Strange to remark, Figs grown here on the open wall do well. Plum blossom looked remarkably promising, but the continuous bad weather has affected the setting of the crop and made it thin. Plums on standards, owing to their flowering much later, have set a fairly good crop. All the better varieties of Pears on the walls were rather short of blossom, and have therefore a thin crop. Standards show a good crop. Apples looked remarkably well earlier in the season, showing an extra display of blossom, but owing to the continued dryness they dropped a quantity of their fruit. Small fruits on the average give evidence of a good crop throughout. Strawberries have been good, especially Royal Sovereign, which maintains its good name.

Vegetable crops in general were good, except Peas, which have gone much to straw with the wet weather. The earlier varieties of Potatoes, such as Sharpe's Victor, which were planted before the bad weather in March, made a very good start, but owing to the late frosts got badly damaged. Later varieties and field crops in general look remarkably well, the spell of dry weather during the early stages being favourable to their growth. Those of the early varieties which are now being used are under average size, the season being quite three weeks behind.—J. F. SMITH.

Eglinton Castle, Irvine.—All small fruits are a good crop, but two to three weeks late. Old plantations of Strawberries (three and four years) are very poor, but young plants are bearing a good crop. Apples, Pears, Plums, and Cherries are a thin crop and very disappointing after a splendid show of blossom. The continued cold weather in May and early June caused them to drop after they were set.—W. PRIEST.

Clifton Park, Kelso.—After passing through one of the most trying springs which we have experienced for years the prospects of a good fruit crop were very small. On May 6, 7, and 8 we had 9°, 10°, and 6° of frost; again, on the morning of May 26 we had 4° of frost. The consequence is, Plums, Pears, and Cherries suffered severely, the crop being a poor one. Apricots are an average crop, although damaged to some extent by frost in spite of protection. Peaches are a failure on the open walls; Apples are a good crop. They being late in expanding their blossoms escaped the late frosts. Currants are a heavy crop; Gooseberries about an average. Raspberries are a heavy crop, the rains which we have had lately proving most beneficial to them and all fruits. Strawberries are neither so large in berry nor in quantity as last year owing to the prolonged drought we had in June.

Vegetable crops almost without exception are late; the weather we experienced in spring was so wet and cold, that vegetation was almost at a standstill. On March 24 we had the lowest reading of the thermometer for the season, viz., 34° of frost, or 2° below zero. Fortunately, there were 3 inches of snow lying on the ground, or the result must have been much more serious than it was. Early Cauliflowers were later in maturing

than usual, but that was amply made up in the quality. Methven's Extra Early Forcing and Early London wintered in a cold frame have given us a supply which leaves nothing to be desired in quality and quantity. Early Peas have been a very heavy crop, and successions are promising to be equally so. Root crops, although a long time in making much headway, came away with a rush after warm weather set in. Early Turnips have run to seed badly. All winter crops, such as Brussels Sprouts, Savoy, Borecole, Broccoli, Leeks, and Celery, give promise of giving abundant supplies. Brussels Sprouts at time of planting gave a lot of extra labour in the way of watering and made very little growth till rain came. Since then they have grown away splendidly.—J. MACGREGOR.

Calder Abbey, Calder Bridge.—There is a scarcity of all kinds of stone fruit, especially Plums and Damsons. Apples are only a moderate crop, also Gooseberries, especially on young trees; the older trees are carrying a very good crop. Black Currants are a heavy crop, as also are Red and White, and the fruit is quite as large as in former years. Raspberries are also a heavy crop, and the same may be said of Strawberries, especially Royal Sovereign. I attribute the scarcity of stone fruit to the wind and rain which we experienced just as the fruit should have set, the show of blossom being quite up to the average.

Peas have been poor, as the dry weather was very much against them, but they are doing better now. Beans of all kinds were very good, as also are Beetroot, Carrots, Parsnips, Cabbage, Cauliflowers (early), Leeks, Potatoes, and Onions, although the last are very much troubled with grub.—H. SANDWICH, JUN.

Barrogill Castle, Mey, Thurso, N.B.—Owing to the late spring the crops in the garden are not so forward as last year at the same time. There is a very heavy crop of Gooseberries and Currants. Strawberries are scarcer, grub having been hard on them in May. This, I believe, is the most northerly garden on the mainland, and much exposed to the north and north-easterly gales. Apples are not so plentiful as last year, owing to easterly winds and a heavy hail shower when the trees were in blossom.

The vegetables are looking very well.—G. HEGGIE.

Glamie Castle.—The fruit crops in this neighbourhood are under the average this year, except Strawberries and Gooseberries, which are a heavy crop and of good quality. Raspberries promise to be a fair crop; Currants and Cherries are light. Pears are a poor crop, and Plums are almost *nil* both on wall trees and standards. Apples are only a casual crop. Some young trees are bearing good crops of fine fruit, but the bulk of the older trees has very little fruit on them.

Vegetables are all very good crops except the Cabbage tribe, which have suffered very much from the grub. Potatoes in gardens are looking very well; early ones are of fine quality. Field Potatoes are very late and not looking well.—THOS. WILSON.

Terregles, Dumfries.—The fruit and vegetable crops in the south-west of Scotland are on the whole of a very fluctuating nature this season. I hear from many reliable sources that they are much under the average, while in some cases reports speak favourably of the yield of some kinds of hardy and half-hardy fruits and vegetables. The weather is always a guiding element in the cultivation of all kinds of garden crops, and in this immediate neighbourhood it has been from a weather point of view one of the worst seasons we have passed through for many years. The winter was mild, with a very heavy rainfall, while all through the spring months the atmosphere was dull and damp, with a continuation of excessively low temperatures and an unusual lack of sunshine, which retarded the early growth of fruit trees, vegetables and crops generally. Without having any real genial spring weather, summer burst on us all at once, and the sudden rise of

temperature and the scorching sunshine experienced in the early part of June were very trying to all kinds of plants, both under glass and out of doors. In this district Apples and Pears are very much under the average, and the same must also be said of stone fruits, such as Peaches, Apricots, Nectarines, Cherries and Plums. Bush fruits, such as Gooseberries, Currants, &c., are an average crop and the quality good, while Strawberries and Raspberries are giving a very good return, and if the weather now continues dry, good gatherings of fruit will be got from them for some weeks to come.

Early Potatoes, although ten days later than usual, are lifting well and the quality is excellent. Field crops look well everywhere, and up to date no sign of disease has made its appearance. Vegetables under good cultivation are, generally speaking, looking fairly well at this date, although we had to wait eight, ten and in some cases twelve days longer for Peas, Cabbages, Cauliflowers, Carrots and Turnips. The weather, however, is now favourable to their growth, and little difficulty will now be experienced in keeping up a good supply.—JOHN MACKINNON.

Carron House, Stirlingshire.—Here the Apple crops never were better. I seldom have a failure of a single tree, a selection having been made some seventeen years ago of sorts which do well in the locality. They are kept well above the surface of the low-lying ground, which cannot be properly drained. The roots are rendered independent of wet and unwholesome subsoil by reason of their being kept up by a good layer of lime rubbish, and encouraged by frequent surface dressings. Fruit-bud formation then becomes certain and the buds well matured. Among the best and certain croppers are Stirling Castle, Seaton House, Lord Suffield, Golden Spire, Lord Grosvenor, Large American, Potts' Seedling, Wellington, Sandringham, Northern Greening, King of Pippins, and Worcester Pearmain (this last does as well here as I ever had it in the south of England). Small fruits made a great show, but the severe frost at the end of May reduced them severely. Morello Cherries on eastern aspects were a good crop. Plums on standard trees were a heavy crop, but only confined to the Victoria. On high walls the crop of Plums promised to be abundant, but they thinned themselves very severely. Pears as cordons trained on high walls are a good crop. Beurré de Capiaumont, Louise Bonne of Jersey, Jersey Gratioli, Van Mens Leon Leclerc, and Easter Beurré are the best, but are small compared with those of last year. On western aspects the Pear crop is thin.

Vegetables on the whole have done fairly well on our heavy soil. In the early part of the season there were fears that many failures would occur. Such untoward weather as we had during April and May is rarely experienced. Potatoes and some other crops seemed almost to collapse, but during the warm summer weather they quickly recuperated. The Potato crop generally is good and the quality is very fair, especially the kidney varieties. Veitch's Ashleaf is still one of the best. Sharpe's Victor (yellow variety) is the favourite for earliest supplies. Snowdrop, Syon House Prolific, Austin's No. 1, and Dobbie's Main-crop Russet are much in favour for field culture. Regents and Abundance are largely grown; they are considered good disease-resisting sorts. All the Brassicas have suffered severely from caterpillars. Peas suffered much from drought. Onions were long in starting into growth, and the size of bulbs is generally less than in former years. They are very free from maggot. Veitch's Maincrop is by far the best. Ailsa Craig is of good size and of fine form. The finest Peas were Chelsea Gem, Gradus, Dickson's Favourite, Dr. McLean, Autocrat, Duke of Albany, and Ne Plus Ultra. I never saw the ground so dry as at present, it being like dust to a depth of 1½ feet.—M. TEMPLE.

Galloway House, Garliestown.—Small fruits in this part were good average crops, Currants of sorts and Raspberries being especially

heavy, while Gooseberries and Strawberries though slightly below the average of former years in weight of crop, gained some compensation from the excellent weather that prevailed at the time the fruit was ripening, which enabled nearly all to arrive at maturity free from waste. Apples are not a full crop, but are now turning out much better than was anticipated a few weeks ago, as the recent heat and moisture have swelled the fruit very quickly, and although less in bulk, very good samples of sound and handsome fruit will shortly be ready for storing. A few varieties have good even crops, of which the best are Lod-dington, Warner's King, Lane's Prince Albert, Alfriston, Keswick Codlin, Yorkshire Beauty, Galloway Pippin, Lord Suffield, and Manks Codlin; dessert sorts, King of the Pippins, Thorle Pippin, Beauty of Bath, James Grieve, Worcester Pearmain, Cox's Orange Pippin, and Mr. Gladstone. Apricots are fair crops; Moorpark, Large Early, and The Royal are the best. Pears are very scarce, and both in quantity and quality of the fruit are much inferior to any crop for many years past; Pitnaston Duchess, Williams' Bon Chrétien, Beurré Bosc, Ne Plus Meuris, Fertility, and Beurré de Capiaumont are the most promising. Plums are generally a thin crop, though some varieties are very satisfactory in this way, and the fruit will be large and well coloured, which, thanks to the absence of wasps and, so far, excess of rain, can remain upon the trees until fully ripe. Early Rivers, Czar, Pond's Seedling, Victoria, Magnum Bonum, Goliath, and Belle de Septembre are bearing fair crops, while of dessert varieties, Kirke's, Lawson's Golden Gage, Jefferson, Denniston's Superb, and the Green Gage are the best. Damsons for the second year in succession are almost fruitless. Dessert Cherries were a very light crop; Morellos are below the average, but an excellent sample, being large and well coloured. Peaches, Nectarines, and Figs are very scarce, and some of the trees fruitless.

The drought has not been so severely felt here as in many places; consequently vegetables are very plentiful, and late Peas, runner and dwarf Beans and Marrows have grown to an unusual extent and are cropping very freely. Potatoes on well-manured and deeply-worked land are heavy crops and of excellent quality, but on shallow soils the dry weather has checked the growth and the yield will not be a heavy one. Field crops are mostly free from disease, and are now showing signs of ripening off very rapidly.—JAMES DAY.

Tynninghame, East Lothian.—Apricots are a very light crop; Plums average. Some kinds of Apples and of Pears are good; others very thin. Peaches have never been worse with curl, while the crop of fruit is not a heavy one; Figs about an average. All kinds of fruit trees with the exception of Peaches have vigorous, healthy foliage, and the fruit large for the time of year and promising to be finely coloured. Of small fruits all are a good crop, but in some gardens there are no Gooseberries, and Strawberries are also somewhat erratic as to cropping.

Vegetables are looking well and growing luxuriantly. Cauliflowers are the one exception, and these are poor.—R. P. BROTHERSTON.

The Hersel, Coldstream.—There was an abundant blossom, but this was succeeded by a spell of dull, cold, wet weather, and again by a long drought; hence the disappointing results.

Vegetables, though somewhat later than in normal seasons, have been good so far. Peas have been abundant. Potatoes look well, not having been injured by frost, as they often are here.—JOHN CAIRNS.

Judging at the Crystal Palace show.—The judging was very erratic in many cases at the great fruit show, but perhaps the worst instance was that in the class for Beurré Diel Pear. The excellent dish shown by Mr. Wythes should have been first without a doubt, and the winner of the first place would, I should say, be one of the first

to acknowledge its superiority. I do not know who the judges were. I am simply stating my opinion of their methods. The Syon House fruit was equally or very nearly as large, much cleaner, and, I consider, far better in every way than that on the winning dish.—H. R.

STOVE AND GREENHOUSE.

BOUVARDIAS.

THESE are among the most serviceable plants we have either for cut bloom or as pot plants for the conservatory. By growing on successive batches of plants, or stopping them at different times, they may be had in flower from now onwards well through the winter. With the exception of *B. Humboldtii*, which does not flower well when stopped late, the more they are stopped the better the results will be, and those required for late blooming should be selected from those that were propagated early in the year, and if they have been left to make fairly long growths, or even if they have begun to show flowers, may be stopped back now and allowed to make a new start. They do not require much heat, but should have all the light possible, and although air should be given, a cold draught or dry atmosphere should be avoided. The syringe may be used freely until they begin to open their flowers. It is most essential to keep the plants free from insects. A very small brown thrips is often very troublesome, and if once it gets established there is little hope of getting good blooms. Frequent fumigating is the only remedy. If plants are clean and healthy to start with, clear soot water used for syringing will go a great way towards keeping all insect life off; it is also beneficial as a liquid manure, especially when used with cow manure. The period of flowering may be considerably prolonged by the judicious use of manures, but whatever manure is used, it should not be over-done, and when liquid is used it should always be allowed to stand until it has settled down, so that it can be used in a clear state.

I have often heard complaints that *Bouvardia* bloom does not last well after it is cut, and in the summer-time no doubt this is the case, but after the weather gets cooler it will last very well if the plants are grown in a cool house. I believe it not infrequently occurs that the bloom is not cut until it is nearly exhausted. If cut when the first two or three blooms on each truss are open and put into water at once, I have found it will last fully a week. Although all the *Bouvardias* are worth growing, I should particularly recommend the following as the best for winter: *Vreelandii*, white; *President Cleveland*, scarlet; *Mrs. R. Green*, flesh-pink; *Priony Beauty*, a rather deeper shade of pink; *Alfred Neuner*, double white; and *President Garfield*, double pink. As a pot plant *Candidissima* may be recommended, but it does not keep up a succession of bloom like *Vreelandii*.
A. HEMSLEY.

Abutilons planted out.—Many gardeners grow a good batch of *Abutilons* in pots from cuttings every year, and most serviceable they are, but they are not utilised as often as they might be for clothing pillars and hiding unsightly walls in conservatories. If plants with one or more leading stems are trained up walls, they will, if cut back annually, break into dense heads and hang gracefully down, forming objects of considerable beauty and proving useful for cutting. They need a loamy compost of average richness, well drained and porous, and will stand frequent and liberal applications of liquid manure while making their growth.—J. C.

Euphorbias planted out.—On page 218 "C." speaks of planting out *Euphorbia jacquiniæflora* in preference to growing it in pots, and I should like to supplement his remarks on the subject. Some years ago I planted this *Euphorbia* in a narrow bed, training the shoots up wires, and by

no other method have I been able to produce finer racemes of flowers. Space, however, for this kind of thing is often at a premium, and where such is the case the next best plan is to plunge the pots in the soil of a disused Melon or Cucumber bed and train the shoots up the wires. Necessity caused me to try this plan in the first place, and it gave great satisfaction. As soon as the Cucumbers were done they were removed from the wires, and the soil in the bed, instead of being taken out, was broken up and loosened. In this the *Euphorbia* pots were plunged, and before long the roots found their way through the holes at the bottom of the pots. The soil kept the plants moist at the root, and a brilliant display of bloom was the result.—H. H.

Begonia carminata.—This is a very distinct and useful variety for autumn and winter flowering, the pendulous clusters of bright coral-red bloom being shown off well by the bright green foliage, which is of good substance. It is said to be the result of a cross between *B. coccinea* and *B. Dregei*, the latter being the seed parent, but it certainly partakes more of the character and habit of *coccinea*. Before the advent of the tuberous varieties *coccinea* was a general favourite, and I have seen it grown on into quite large specimens. One great fault, however, was that the bloom dropped as soon as exposed to a change of temperature. This also applies to the male flowers of *carminata*, but the female flowers hold on well. A peculiar feature is the large seed vessels with broad wings, the whole being of the same bright coral-red. Here we have a change from the popular *Gloire de Lorraine*, female flowers being rarely seen, while in *carminata* it is almost as rare to see many male flowers open, as they invariably drop off before they are properly expanded.—H.

Freesias.—So far the bulbs I have seen are not so good as those of last year, being smaller and not so heavy. The largest bulbs are not always best, of course, but they should be heavy according to their size, or they will fail to produce fine flowers. As soon as they are received they should be potted in light, fairly rich compost and go into a plant protector or a sheltered position outside and be covered with cocoa-nut fibre or ashes. A thin layer only is necessary, as if too much is put on there is a danger that the young growths will draw and fall about when taken out. If examined regularly there is no fear of this, of course, and in this case the additional thickness serves to keep the soil in the pots more regularly moist without watering from the surface, which is a mistake. Quite cool treatment from first to last suits *Freesias* best. In a warm house the foliage draws and often gets covered with insects, while the flower-spikes are never so stout and strong. A strand of raffia may be passed round four neat stakes placed in the pots for the purpose, this keeping the plants together and giving them a smarter appearance. When in flower their delightful fragrance makes them favourites for cutting and for house decoration.—H.

Fittonias.—Easily grown and bearing very handsome foliage, *Fittonias* ought to be far more thought of. There are so many ways in which they are useful and ornamental, that one would naturally expect to see them in every collection of plants; but this is far from being the case; indeed, they are not nearly so much grown as formerly. Distinct species are few, but there are many varieties of the two or three species that are grown, and all these may be easily propagated by cuttings placed over a brisk bottom-heat at any time of year. Where there are large pots or tubs in which Palms, Tree Ferns or anything of this class is grown, a few cuttings of *Fittonia* and *Panicum* dibbled in give a pretty surface and hide the bare pot. Fine specimens may be made up by striking a number of young plants in 2½ inch pots and filling pans with these, using the largest and strongest in the centre. Give water rather sparingly until they are rooting again, when increase the supply. Plants slightly pot-bound colour better than do others that have more root-room, and the necessary feeding may be

done by means of chemical or other manures from the surface. *Fittonia gigantea* and *F. Verschaffeltii* are the best known species, each having several varieties.

Begonia Mrs. Leopold de Rothschild.—Pot plants, particularly if free-flowering and of a useful size, are just now among the most valued of subjects, whether for home decoration or for market. It is in this light, therefore, that the above will prove welcome, for it is not merely the embodiment of much that is useful and beautiful, it is also an attractive plant. The new-comer appears to have originated with Mr. Jas. Hudson at Gunnersbury House, having sported apparently from the well-known *B. Gloire de Lorraine*, which kind in some respects it much resembles. Indeed, in habit or rather in leafage it is the counterpart of this latter, while in general aspect it is a closer growing plant, and therefore would appear denser in its flowering. In short, as a pot plant it is a perfect model, the neat little bushes crowded with flowers from base to summit. Nor is this all, since the clear pink shade of the flowers gives it a final touch that cannot fail to carry weight, and therefore render it one of the most popular of all these plants. In its own way it is one of the finest novelties that has appeared this year, which is saying a good deal, and it is a novelty come to stay, which cannot be said of all novelties. Possessed of the same constitution and growth, it will be able to be increased in quantity and rapidly, so that there will be no interval of years before the plant is within the reach of all.—E. J.

New Heliotropes.—During the present year three new varieties of *Heliotropes* were presented in good form to the floral committee of the Royal Horticultural Society for certificate. The plants were in small pots, in good flower, and well grown, and came from the gardens at Gunnersbury House, where, after some three years' trial, Mr. Hudson considered them superior to existing kinds for the purpose indicated. Ultimately it was desired that plants of each be sent to Chiswick for trial. Under the circumstances, however, and seeing the lengthy, not to say absolutely impartial, trial given the plants by Mr. Hudson himself, whose only motive in the matter was to test the merit or otherwise of these against older sorts as bedding plants, Mr. Hudson decided not to send the plants to Chiswick as suggested. Having seen these kinds during the present week in the Gunnersbury House gardens, we can support Mr. Hudson in his view as to their superior qualities, and as good free-flowering and decidedly profuse blooming kinds, both in pots and in the open air, they deserve to be very widely known. Their names are: *Picciola*, an exceptionally good dark, and probably the finest of the set; *Mme. Fillay*, pale lilac, large-headed truss, and very vigorous, and *Chameleon*, light blue. Beds of each of these have been for a long time a feature at Gunnersbury House, and the varieties are destined to have a popularity there at least.

Ceropegia Woodii.—Last year I noted the beauty of this when grown in a suspended basket at Kew, and now after further experience I regard it as one of the best of little-known basket plants. Most of the *Ceropegias* are climbers, but this is in a natural state of a procumbent habit of growth, the thin wiry stems travelling for some distance along the ground and rooting from many of the joints. Small, globose, tuber-like masses are also produced at intervals along the stems, even when the plant is in a hanging position. As a basket plant the very slender dark-coloured shoots will droop directly downwards for 3 feet or 4 feet, and are clothed with small, orbicular-shaped leaves of a thick fleshy nature. These leaves are from one-half to three-quarters of an inch in diameter. Their colouring is of a very uncommon stamp, for while the surface is green, it is generally so much marbled with silvery white on the upper side as to be almost entirely of that hue. In this respect, however, a great variety exists even on the leaves of a single plant. The underside of the leaf is tinged with red. Compared with the showy blossoms of some *Ceropegias*, the flowers of this

are small, but they are produced so freely and extend over such a long time that they certainly merit notice. The entire flower is little, if at all, over 1 inch long, the tubular portion being pink and the upper part brownish purple. Cuttings striko root readily if put in at any season of the year. Besides its value as a basket plant, this *Ceropegia* may with advantage be employed for other purposes. For rockwork under glass, particularly if it is kept at a stove or intermediate house temperature, the long slender shoots with their greyish leaves have, when creeping here and there, a very pretty effect, while they will also clothe a portion of a Tree Fern stem if kept moist. Lastly if the plant is secured to a stick 2 feet high and the side shoots are all allowed to assume their natural drooping character, it is decidedly attractive.—H. P.

ORCHIDS.

WATERING ORCHIDS.

By now many of the pseudo-bulbous section of Orchids will have finished their bulbs, and others of various kinds will have reached the end of their growing season. The weather, too, will be cooler and the nights longer, so that a general reduction in the water supply both in the atmosphere and at the roots may be made. The plants in the various houses differ, however, considerably in their wants in this respect, and a knowledge of varieties and observation of individual specimens are necessary to success. A plant, for instance, growing in a pot a size too small for it will need watering at the roots more frequently than one properly suited. The easiest of Orchids to manage in this respect are, of course, such things as *Thunias* and deciduous *Dendrobiums*, which, having finished growing and lost their foliage, may be kept absolutely dry for several weeks. Any later plants not quite finished will need a little until the leaves have dropped, but nothing like regular moistening is needed even here.

Many *Cattleyas* have finished growing, and those which flower upon the new growth, such as *C. Gaskelliana*, *C. gigas*, and *C. aurea*, will have done blooming. These all need much drier treatment now, not sufficiently so to cause shrivelling, but less water than they have been taking during the growing season. With these, more than with most Orchids, it is necessary to watch individual plants, as some will have unfinished growths that require a little sustenance if the older bulbs are not to be weakened. Autumn-flowering kinds, as *C. labiata*, late-growing plants of *Laelia purpurata*, *L. elegans*, and *L. grandis tenebrosa*, again all need encouragement more or less, as well as any plants of the *C. gigas* and *C. Dowiana* section that may have started to grow out of season. Among the distichous-leaved kinds, the *Angraecums* and *Phalenopsis* require more water than *Saccolabiums*, *Aerides*, and most of the *Vandas*, but here again there are individual kinds liking special treatment. The almost deciduous *Phalenopsis Lowi*, for instance, takes wonderfully little moisture later on, though it is as yet too early to dry the roots, while the large winter-flowering *Angraecum eburneum* requires a full supply all the year round, according to circumstances of weather and position. But from now onward far less water in all houses devoted to Orchids will be necessary.

Cypripedium Sedeni.—There are few easier grown Orchids than this and none more free-flowering, the plant being in bloom for months together, and where a number are grown even longer. The flower-spikes occasionally produce young growths that may be taken off and rooted,

these soon making plants. *C. Sedeni* is a strong grower, doing well in an intermediate temperature and a fairly shady house. The roots are very strong and persistent, so a substantial compost must be provided and an ample water supply given all the year round.

Cypripedium amandum.—This is one of the oldest, but still a very useful and pretty hybrid, a cross between *C. insigne* and *C. venustum*. The influence of the former is perhaps the most apparent in habit and the colour of the blossoms, but that of *C. venustum* may also be seen in the dark markings on the leaves and the venation on the lip. It will be noticed that *C. amandum* in a young state has more of the black marking on the foliage than when the plants get older. The intermediate, or even the cool house suits it, for it is as easy to grow as the old *C. insigne*.

Oncidium Harrisonæ.—This pretty little *Oncidium* has always been a favourite with me, its slender spikes of pretty yellow blossoms and the singular grey-green of the foliage giving it a very distinct appearance either in or out of bloom. It only grows a few inches high, and the flowers are easily distinguished from those of any other kind by the rather large crest. It thrives well in an intermediate house and should not be too heavily watered at any season, especially during dull periods in winter. Small pans or pots are most suitable, and the usual mixture of peat and Moss for compost.

Oncidium undulatum.—This is one of the finest of the *Oncidiums* with scendent-flowered scapes, and very pretty when in bloom, especially when arranged with suitable greenery. The plant itself is very vigorous, finishing up immense pseudo-bulbs when the spikes are not allowed to remain on too long, and rooting freely and vigorously through a more than ordinarily rough, open compost. The peat should be good, and plenty of rough lumps of charcoal may be mixed with it. When the roots, as they sometimes do, push over the surface of the compost, cover them with a little Moss if there are slugs or other insects about. The plants may be kept in the cool house the whole year round, and should never be dried at the roots.

Barkeria elegans.—It is strange to note how some plants vary in the way they take to altered conditions. Many cultivators have failed utterly with the *Barkerias* as a whole, and, notwithstanding all the trouble they take with them, get puny, weak growths and poor flower-spikes. It is usually understood that the plants like very little in the way of compost and a cool temperature, but I recently saw some very fine plants of the species named above growing in a *Cattleya* house with quite as much compost in their pots as one would use for a strong-growing *Epidendrum*. Yet the plants were pictures of health and strength, each stem having a fine flower-spike forming, and such a state is, I think, worth noting. *B. elegans* is certainly one of the prettiest of the *Barkerias* and worthy of general cultivation.—H.

Trichocentrum albo-purpureum.—Though not appealing to lovers of large showy blossoms, this pretty species is sufficiently attractive to be worth a place in any collection, however choice. The flowers have a white and purple lip, with tawny brown sepals and petals. Like many another dwarf growing Orchid, it has obtained a bad name as a garden plant simply by being wrongly treated. It will not thrive in a large pot and compost suitable for a strong-growing *Oncidium*, but given a small pan or a lightly dressed block of Tree Fern stem it will usually be satisfactory. For temperature a cool intermediate house is best, and the plants should be suspended in a good light. Water should be sparingly provided all the year round, a moist atmosphere suiting it best while growing. *T. albo-purpureum* is a native of the Rio Negro district in Brazil, and is one of the best in the genus. It first flowered in this country in 1866.

Saccolabium giganteum.—The flower-spikes of this plant are already beginning to

show, and it is important that the plants be kept well up to the light in order to properly harden the leaves. The latter will then be less likely to fall prematurely should the winter prove very cold and wet. Its habit of flowering in mid-winter is greatly against *S. giganteum* remaining in a healthy condition under cultivation, for at the time when the plant is least able to it is called upon to bear this strain. The stronger and riper the plants can now be made, then the better the flowers will be and the less likely are they to suffer from this and kindred ailments. *S. giganteum* thrives best in a strong moist heat with ample sunlight, and while liking less water at the roots when growth is quiet, must not be too much dried. A dry winter atmosphere must be avoided, except in so far as is necessary to conserve the flowers.

Oncidium pubes.—Flowers of a good form of this *Oncidium* come from a midland correspondent. It is a good deal like *O. sarcodes* in growth, so like as to be often mistaken for that species. Both are natives of the Organ Mountains in Brazil, and though *O. pubes* is inferior to *O. sarcodes* in size of flower, it is equally bright and telling and as free-blooming. The spikes on strong plants attain to a height of nearly 2 feet, are much-branched and many-flowered, the individual blossoms yellow with pretty red-brown markings. It is said in some works on gardening that *O. pubes* bears but a single leaf on the pseudo-bulb, but well-grown plants have more often two. It is very distinct in every other way from *O. sarcodes*, and though often imported together from the Organ Mountains, the difference is readily apparent when the plants flower. *O. pubes* does well in rather small pans or baskets suspended from the roof of an intermediate house, where the growth gets well consolidated by the light and air. In a very hot, moist house it grows freely enough, but does not flower regularly. Equal parts of peat and *Sphagnum* Moss suit it well. It is a widely-distributed plant naturally, and was introduced from Rio de Janeiro in 1824 by the Horticultural Society.

GARDEN FLORA.

PLATE 1243.

ANEMONE BLANDA AND VARIETIES.

(WITH A COLOURED PLATE OF A. B. CYPRIANA.*)

ANEMONE BLANDA, the blue winter Grecian Windflower that appears with the *Crocus*, *Primrose*, and other such things, is among the most justly prized of the early hardy flowering plants. It matters not whether the flowers are of the fine blue of the typical kind with its rather long and stellate ray florets giving it so much of its grace and elegance, or of the varying tints that merge from this into the nearly white kinds. It is such things as these that produce—or, in truth, create—verdant carpets where no such verdant carpets appeared before, presently to be embellished in their beautiful shades of colour that fill almost everyone with delight.

The plant represented in the coloured plate is but one of them, though it is but fair to admit a decided and well-marked form of the plant that is now so well known in gardens. It will be noticed that the petals of the variety *Cypriana* are shorter and more rounded, resembling more closely the Apennine Windflower, while fewer, if longer, petals are more usually identified with *A. blanda* itself. These minor differences, however, are of the least possible value to gardeners, and better serve to interest the botanical student than anyone else. Viewed from the standpoint of a garden

* Drawn for THE GARDEN by H. G. Moon in the gardens at Belvoir Castle, Grantham. Lithographed and printed by J. L. Goffart.



ANEMONE FLORIDA (HYDRANGEA)

plant, *Anemone blanda* in any form is excellent, inasmuch as the plant is mostly at home in the ordinary soils that occur, and produces a wealth of blossoms in the earliest spring such as is not equalled by any other garden plant at the time. The plant that can and will do so much and give so much of its beauty to adorn the earth not only merits all praise, it deserves the widest possible culture. Beyond doubt there is a growing desire for such good and distinct flowering subjects for the open garden—subjects, moreover, that are as happy in good clay as they are in the lighter and less holding soils. Of the plant now figured when shown in the early part of the present season before the floral committee of the Royal Horticultural Society every member appeared in favour. The example thus honoured came from the historic Belvoir Castle gardens, where for possibly some thirty years the beautiful *Anemone blanda* has been grown. Indeed, the plant was a special feature for years with the late Mr. Wm. Ingram, and the way it was increased and extended by means of seeds afforded a solid, if unadmitted, lesson in gardening to many who saw the fine display of its flowers in the Belvoir gardens in early spring. That Mr. Ingram's successor has embraced the same view may be gathered from the beautiful subject in the plate to-day. This when shown at the Drill Hall was a mass of pure white on the inner surface of the petals, while externally they were gleaming with a shade between violet-blue and porcelain. The combination of blue and white thus imparted invested the plant with an almost indescribable charm. A little breeze will quickly reveal to the onlooker what is here briefly described, but the beauty of the scene will not quickly be lost to view. Happily, the Greek Windflower is not fastidious, and those who have in the past been delighted with it as one of the gems of early hardy-flowering plants will not be long in adding this variety. As to the

CULTURE

of this section of the Windflower family there is but little to add. A good free open soil will grow them well. In strong loam I have grown the finest examples, some patches occurring in woodland places where the staple soil was strong clay doing splendidly. It is but right here to add, however, that the twiggy roots of tree and shrub afforded a welcome kind of environment for such things in winter, so much so that all idea of a waterlogged condition of the soil was never thought of. In open spots in the shrubbery there is a delightful home for this plant, and in any other of the places named, so long as a good free-rooting medium is at hand, the culture of these things gives little trouble. The places where they refuse to thrive or to grow at all are in the minority, and the fault usually a local one, and generally that of very poor or badly drained soil. The best method—i.e., the quickest and most valuable by reason of the variety afforded—of increasing these plants is obviously by seeds, which are usually borne abundantly. The seeds are best sown in the open in shallow drills or broadcast, though for reasons of weeding and the like the drills are best. The soil of the seed-bed should have been previously well prepared, as the seedlings must at least remain for eighteen months before being transplanted or even ready for this. The season of transplanting can always be measured by the progress of the seedlings themselves, and, provided the seedling bed is in good ground and room is at hand, no loss will be sustained by allowing the young plants to remain another year. Assuming that

the seeds are sown after the flowering this year, the first blooms would appear in the year 1901, yet by no means is it likely all the seedlings will be of flowering size in the time stated. Still, much may be done to accomplish this by hoeing, watering, and other small attentions in the same direction, none of which can possibly be lost on so good a plant. A good way would be, if a large sowing has been made, to lift the plants with the first signs of decaying foliage and select those of flowering size, i.e., those having flowered the first time. All such may be given permanent places in the garden, while the remainder may be replanted for a later period. In all its forms it is so good a plant as to be worthy of every care, and those who grow it well are usually well repaid for their labour. E. J.

THE WEEK'S WORK.

OUTDOOR FRUITS.

THE ORCHARD.—As a rule the orchard connected with a private garden is greatly neglected, the trees being allowed to grow almost at will and the fruit produced is small and spotted, only the best of it being of any service either in the kitchen or as dessert. It requires some amount of courage and entails much labour to bring such trees into something like form and induce them to bear fruit of good quality, and the gardener who intends to do this should commence operations as soon as the fruit is gathered and push on with the work whenever the opportunity offers, first of all tackling the thickest and most unpromising trees. The thinning of such trees, or rather the marking of branches which would be better taken off, must not be left to the ordinary garden labourer, who has generally the most hazy notions of what is required, and would prefer to cut off all the bottom branches and leave those on the top of the tree, because he may have noticed that the latter have borne the best of the fruit, and also, possibly, because it is easier to cut away from below. To thin a tree judiciously requires judgment, for in some cases a branch may have to be removed entirely right away from the main stem, and in others it is only necessary to remove some of the strongest side growths made from the main branches. Again, only a practised hand can mark a big and neglected tree at sight, and it will be found much the better way to be on the spot most of the time while the actual branch-thinning is going on, as one can then see the result of taking away each branch as it comes and act on such result when dealing with the next branch. After having gone through the tree in this way until it appears to be thin enough as to its frame, each branch left should be gone over, removing entirely some of the gnarled old fruiting spurs and reducing others. The entire removal of some will cause a fresh break of spur-growth from the branch, and these in the course of two or three years will take the place of the older ones which were only shortened at first, but which can then be cut out in their turn without sacrificing a crop. In treating old trees in this way, many of them will become rejuvenated and will go on for many years longer, producing finer fruits than they have ever borne since they began, imperceptibly at first, to thicken up and to shut out light and air from a goodly portion of their crops.

AMERICAN BLIGHT.—The season appears to have suited this pest, for I have seen more this year than I ever saw before, and this in many parts of the country, all districts being alike infested. There can be no doubt that this is the result of neglect in a sense, or rather in a want of persistence in application of remedies, for there are many insecticides, among them some home-made ones that I have recommended in my calendar notes, that will kill any of this blight that they touch, and yet we see the woolly flecks all over the trees.

Nurserymen are greatly to blame in spreading the blight, for many of them send out young trees apparently clean in their winter garb, but which show in the growing season that they are badly infested. Surely this is a suicidal practice, which will bring its own reward in the end, and one is sorry to find that the practice is not confined to the small nurseries, but obtains among some of those with a big reputation, who ought to avoid selling such stock, as the work of cleaning is not nearly so troublesome with young stock as it is with older trees. There is some excuse for a little neglect in a private garden where, perhaps, help is limited and many other things have to be attended to, but in the nurseries to which we look to replenish our stock the neglect is reprehensible.

PEACHES.—In some soils and situations Peach trees have a tendency to make gross growth, and if this tendency is not counteracted in some way the trees never crop freely and generally become blistered. Before adopting any other means of reducing this grossness I would suggest lifting the trees and providing for them a mixture similar to that recommended for Peaches under glass. If the case is not a bad one, it will be sufficient to take out a trench at a suitable distance round the tree, gradually working up the latter until the ball left is not a large one. This is necessary so that one can find and sever any roots that may have struck downwards, as such roots as these are the greatest possible sinners in producing soft, gross, and unfruitful wood. Fortunately, Peach trees are not much given to the production of these vertical roots; still, they do so occasionally, and where there is a suspicion that this is the case they should be searched for. Some of the roots exposed in opening out the trees may also be shortened back and then covered in with the new soil, which should be firmly rammed in.

BUSH FRUITS.—Proceed with the planting of all kinds of bush fruits whenever the ground is in a fit condition for being trodden upon, but do not continue the work in wet weather if the soil is inclined to be heavy, as it then must be returned to the roots in a pasty condition and becomes impenetrable to the finer root fibres. Watering in after planting is finished is quite another thing, as the whole body is then rendered of one consistency, and the rootlets find no difficulty in penetrating the soil provided it has not been trodden upon after watering. When planting Gooseberries and Red or White Currants examine the stems and remove all adventitious buds that would be likely to form sucker growths below the soil line, as these growths are more or less robbers, and in any case they are not necessary. With Black Currants, on the other hand, such sucker growths or buds may well be left on, as the shoots they produce are likely to be very fruitful ones, the Black Currant liking always a plentiful supply of young wood, room for which should be made by cutting away much of the older growth. In choosing positions for the various bush trees, it should not be forgotten that both the Gooseberry and the Black Currant like a cool soil, and if one position is inclined to be wetter than another, it should be devoted to the Black Currant. The espalier form of training suits the Gooseberry and the Red Currant well, and very useful dividing lines to the various plots may, with the aid of a few strained wires, be formed with them.

FILBERTS.—Any of the bushes which have become at all too thick should be thinned out now, allowing plenty of room between the main leads. The spurring in of shoots may be left till winter or spring if it is inconvenient to carry it out now, and some growers leave all pruning until after the catkins have shed their pollen with a view to having as much pollen as possible for fertilising. One thing ought, however, to be done as soon as possible, and that is the removal of the sucker growths which nut bushes so persistently form, as these rob the nuts and cause them to be small and poor. When clearing off suckers remove also coarse grasses round the bole, and mulch heavily with good rotten manure. CORNUBIAN.

KITCHEN GARDEN.

GLOBE ARTICHOKE.—When giving instructions about sowing this vegetable in spring I suggested that the seedlings should be put out on some spare piece of ground and proved previous to making up the permanent rows, as so many out of a batch generally are worthless or very inferior. Those worth retaining may now be planted in good deeply-worked ground—that is, where the latter is fairly warm and well drained. On heavy, retentive soils it will be wisest to defer planting till spring, giving the plants a liberal mulch of short littery material in November. Those whose stock needs renewing and who are able to secure a sufficient number of fairly stout side offsets should now sever them from the parent stools and pot them up into, say, 6-inch pots, giving them the shelter of a cool pit or frame, and plunging the pots in coal ashes or old leaf-mould. A rough covering can then be thrown over them should very severe weather occur. These will become established by March, and if then planted out will give finer, though, of course, later, heads than old weakly stools. In some few gardens mulching old plants in winter has been abandoned, gardeners having an idea that it does more harm than good, but the fact is it is the rotten manurial mulch which does harm in snowy or wet, rainy winters, as severe frost coming when the material is in a soddened state destroys the crowns. If due care, however, is exercised and the right kind of loose litter or even dry Bracken packed round each shoot, this in the event of a snowy or wet November and December being removed and a fresh lot placed round, no damage need be apprehended. Where Artichokes are valued as late in the season as procurable, those whose plants have thrown up autumn heads may ensure their safety from injury by driving in a few rough stakes and protecting at night with old mats or canvas. Where plants are at all weakly liquid manure may still be given, but on stiff soils no more moisture than that which falls from the clouds should reach the roots.

CAULIFLOWERS.—It is now time—at least in gardens situated in midland and northern localities—that the first batch of such Cauliflowers as Early London, Erfurt, and Walcheren were placed in the handlights. Where these are still used a great advantage is gained, as no root-disturbance, and consequent check to growth, occurs through lifting in spring, and protection from frost is as easily effected as when the plants occupy frames or pits. Presuming the ground was well trodden and the lights placed in position, as advised a short time ago, the soil should now be in a nice firm condition for receiving the plants. Where the seedlings were pricked out into nursery beds they may now be carefully lifted with a trowel, and should feel the effects of removal but little. If rain has not fallen recently, give the soil a nice moistening with a fine rose two days previous to planting, and choose a calm, dull day for the operation. Avoid the too common practice of lifting and laying out too many plants at a time; rather repeat the journey and lay out say as many as will fill a dozen hand-lights, otherwise the delicate fibrous roots are apt to suffer. If the lights are full-sized, I like to place five plants in each light, one at each corner and one in the centre. This is a good number, as they can then be reduced to three in spring, and allowance is thereby made for destruction by grub or bolting. Plant firmly and sufficiently deep to prevent the plants swaying to and fro by late autumn winds, as these ruin many a lot of plants in exposed gardens. Planting completed, give a gentle watering to settle the soil round the roots, and if the weather is open and nights warm, leave the tops of the lights off for the present. Should, however, frost or very rough weather set in, they will be better left on, arranging them crossways so as to admit a little air. If the plants have to be drawn from the seed beds, avoid the largest, choosing rather the medium-sized ones with perfect centres. The next thing requiring attention is the protection of a sufficient number of plants in pits or frames for transplant-

ing for successional supplies in June. Where later sowings are not coming on take care to select the smallest plants for this purpose. The smaller the better, provided they have perfect centres and are free from the disease known as blacklegs. The shelter of the frame front frequently induces Cauliflowers, Cabbages, and Lettuces to become too large by March or April, especially should the winter be mild and open. Both amongst hand-light stock and plants in frames a sharp look out will be needed for the troublesome underground grubs which cut the plants asunder just beneath the surface. Should the weather set in wet and slugs make their appearance, dust fortnightly with a mixture of lime and wood ashes or not too fresh soot. I have also used a mixture of wood ashes and flowers of sulphur for dusting between plants in pits and frames during trying winters and springs, having proved it to be an effectual absorbent and saving the plants from wholesale decay. But no measures of this kind will avail unless coupled therewith is careful and systematic ventilating. I cannot too strongly advocate the system of taking every care of surplus plants either from main or secondary sowings, pricking these out rather closely together in sheltered nooks and corners where protection can be given in severe weather. Of course, there is a certain amount of risk attending this, but the labour of pricking out is small, and often after mild or medium winters such often do better than those which have been taken care of in the orthodox fashion. When beds have failed from any cause and other sowings have had to be resorted to, I have sometimes, in consequence of the seedlings being late and weak, covered them with a spare light resting on four flower-pots. This makes a vast difference to them in cold, stormy weather.

J. C.

FERNS.

SPECIMEN FERNS.

It is now rarely one sees the immense overgrown specimens which were met with at one time at most exhibitions, and though in a way interesting, I think fresh, healthy, younger specimens are far more useful and certainly more elegant. There are exceptions, of course. Some of the Tree Ferns, for instance, may be grown on for ages and retain a symmetrical and noble appearance, but with the exception of those which form an erect stem, young plants make finer fronds and are not so dense and irregular in outline. Most Ferns are pretty in quite a small state, but there are some which cannot develop to their full beauty unless grown on freely until they attain to fair-sized specimens. The following are a few which are well worthy of a place in any collection, and when well treated make fine specimens. Of the numerous varieties of *Adiantums* which may be grown on until they attain to large specimens,

ADIANTUM TETRAPHYLLUM ACUMINATUM may be commended. When confined to a 5-inch pot this makes a well-furnished plant about a foot high, but potted on in a good porous compost and grown on in the stove it makes a much taller plant. The young fronds have a peculiar soft mauve tint, changing with age to a rich deep green. From Central America.

A. CARDIOCHLÆNUM also makes a tall and elegant specimen. The fronds are of a soft pale green, and, when much exposed, almost straw colour, with a pretty tint in the young fronds. Although the above is the most popular name, *A. polypodium* is adopted in Hooker's "*Species Filicum*." From Peru. Both of the above should be grown in the stove, and succeed best when well exposed to the light.

A. TRAPEZIFORME is well known, but may be mentioned, as it will make a larger specimen than any of the genus. This also comes from Tropical

America, but does fairly well in an intermediate temperature. All of the above have spreading rhizomes, and when propagated by division an extra strong single crown will make a much finer specimen than where a number of weak crowns are grown together. They may be grown in large pans or pots, but when the latter are used a good depth of drainage should be given. Of those with smaller pinnules,

A. ETHIOPIUM ALATUM is the tallest, attaining from 3 feet to 4 feet in height. It will succeed well in an intermediate temperature or may be grown in the stove, and if given plenty of pot room it grows rapidly.

A. WILLIAMSII may also be included. This does well in a greenhouse temperature.

DAVALLIA EPIPHYLLA is a native of Java and the Malayan peninsula. It is a distinct and beautiful species. The thick rhizomes spread freely and have a tendency to grow upwards. The large drooping fronds are finely cut and of a thick leathery texture. It may be recommended as one of the finest of the genus, especially for growing on into large specimens. Although usually classed with the stove Ferns, it does well in an intermediate temperature, and the fronds being of great substance it should prove most useful for decoration. In potting, the plants should be kept well up in the centre and plenty of drainage used. As it requires a good deal of surface room, pans are preferable to pots, particularly for the larger specimens.

D. SOLIDA is another fine species from the same locality. The rhizomes run out longer and keep on the surface. The fertile fronds somewhat resemble those of the above, but the barren ones have broad pinnules of a deep green with a bright surface. Grown in a suspended basket the rhizomes will run down a great length. This and *D. ornata* are sometimes confused; the latter is only a variety, but sufficiently distinct to retain the name. I have not seen this produce such finely cut fertile fronds.

MICROLEPIA PLATYPHYLLA.—Though now included with the *Davallias*, this is very distinct in habit of growth and general appearance. It has soft, fleshy underground rhizomes. The fronds grow nearly erect and are of a pale glaucous green with broad-lobed pinnules. The spore cases are not quite marginal, as in the true *Davallias*. When grown on freely it makes a fine specimen, the fronds attaining to fully 4 feet in height. It succeeds well in a loamy compost with good drainage. It may be increased by division, but seedlings make much better and more compact plants. Even as a small plant in a 6-inch pot it is very pretty, but the fronds in young plants are too soft to be of much service for cutting.

MICROLEPIA HIRTA CRISTATA.—Although this may be recommended for growing on into large specimens, it is apt to get too coarse when treated liberally, but when grown in loam and confined to moderate-sized pots the fronds are of a beautiful soft pale green. It is inclined to get dense, and it is only when grown on from a single crown that it makes the beautiful arching, tasselled fronds. I do not remember to have seen fertile fronds of this, but have not paid particular attention to this point. Being so readily increased by division, it is hardly worth troubling to raise seedlings.

DIDYMOCHLENA TRUNCATULA.—Though not a very serviceable Fern for decoration this makes a very handsome plant. Potted in a rich porous compost and grown in the stove it makes rapid growth, and the large spreading fronds have a bronzy tint when young, changing with age to a bright olive-green. In older specimens the fronds will attain to from 4 feet to 6 feet in length. It is, perhaps, seen at its best in a young state before it has lost the earlier fronds which clothe the base. Spores germinate freely, and in quite a small state it is very pretty. It is of easy culture, except that with a change of temperature or when allowed to get too dry at the roots the pinnules fall off. The above is the name usually given, but *lunulata* is perhaps more correct. It

is a native of Tropical America, and is also found in Madagascar, the Fiji and Malayan Islands.

CIBOTIUM SCHIEDEL.—This makes one of the most effective specimens. The long, gracefully arching fronds, which are finely cut, are of a soft pale green above and of a peculiar glaucous hue beneath. The crown and lower portion of the frond-stalks are densely clothed with long hairs of a pale brown with a silvery shading. It is only from spores that this can be obtained, and I have rarely seen a large batch of seedlings. It appears that it is only when spores are collected from plants in their native habitats that they can be depended upon to germinate. Once seedlings are established they make rapid progress, but it is not until the plants have attained to a good size that they are very attractive. It is a native of Mexico and Guatemala, and is now included with the genus *Dicksonia*. Although it forms a trunk, it must be very slow in doing so, for plants I have known for years, though the crowns are very conspicuous, do not rise much above the ground.

LITOBROCHIA VESPERTILIONIS.—Some time ago I saw a nice batch of this useful Fern at Messrs. Hill and Son's nursery, Lower Edmonton. It may be grown on into large specimens, and the peculiar soft green with the pale under surface makes it a desirable variety for contrast with those of deeper shades. Although from the tropical regions, it succeeds well in an intermediate temperature. As the rhizomes spread and require more surface room than depth, larger specimens should be grown in pans. This Fern is given as synonymous with *L. incisa*, but this, which I had from Kew a few years ago, is very distinct from the variety grown by Messrs. Hill and Son, and of which I have dried specimens collected nearly thirty years ago. This Fern may be propagated by division, yet seedlings are preferable, as they make more compact and better furnished plants. A. H.

Dicksonia antarctica.—Though one of the oldest and best known of the Tree Ferns, it is surprising how little attention is given to this species. In the majority of cases the plants are simply left alone to grow a little every year and die back about as much, so instead of a handsome well-feathered head there is a whorl of leaves fresh and green, another in some stage or other of decay. The plan of establishing small bits of other Ferns on the stems of this class is very apt to be overdone, and many plants have been killed by this means. A few bits of *Davallia* or some similar creeping Fern may do no harm if not allowed to run too far and choke the small roots of the *Dicksonia*, which are numerous on the stem, but to clothe the latter entirely is a great mistake. The roots of *Dicksonia antarctica* must of necessity be kept in pots of more or less limited size, unless, of course, it is planted permanently in a winter garden or conservatory. This being so, feeding is absolutely necessary, soot-water used in connection with one of the better class of artificial fertilizers being a capital medium for the purpose.

Adiantum elegans.—In many respects this plant resembles the well-known *A. cuneatum*, but it is hardier and much freer in growth, yet standing equally well when cut. It will not, of course, come absolutely true from spores, but a number of the young plants will usually be all right, and not long since I saw a batch raised in which very few of the seedlings showed any deviation from the type. A very short life is before many of the thousands of young Ferns that are annually sent out from our market nurseries, but this should stand as well as any of them, and, of course, the fault lies not with the Ferns, but with the treatment to which they are subjected. As a matter of fact, most of them are seedlings, and these make far better plants than divided old specimens if not allowed to get pot-bound before being repotted. Small shifts are best for them, and if it is desired to push them as fast as possible, *A. elegans* may be given a much richer compost than is usually thought necessary

for Maiden-hair Ferns. Nitrate of soda and soot are capital stimulants for Ferns and Palms, putting colour into the leaves and making them very vigorous.—H.

FERN SPORES.

REPLYING to "A. D.'s" inquiry (p. 247) in reference to my remarks on collecting Fern spores (p. 186), it would, perhaps, have been as well to have given my reason for recommending that spores should be collected from plants which have been isolated as far as possible from others which produce spores freely. I had no idea that anyone would suppose that this advice was to avoid cross-fertilisation, especially one who might be expected to be better informed on these matters. It is quite evident that "A. D." has not had much experience in the raising of Ferns, otherwise he would know of the dangers of taking spores of those slow to germinate from plants which have come into contact with what may be termed Fern weeds. With the greatest care it is well known to those who have had any experience that some weeds will occur, and it not infrequently happens that some of the choicer sorts are completely choked by these Fern weeds. I have previously given the names of some of the most troublesome, but may mention those which have given me most trouble. They are: *Nephrodium molle*, *Polypodium trichodes* (syn., *P. tenericaule*), also known as *Phegopteris trichodes*, *Gymnogramma Pearcei*, and *G. chrysophylla*. Now, if the above varieties with matured fronds are in the same house from which spores of *Asplenium*, *Platyserium*, *Cheilanthes*, or others with woolly fronds are gathered, it will be a great chance if anything but the above weeds are obtained. I could give further instances, but the above will be sufficient to illustrate what was meant by recommending that spores should be collected from plants which have been isolated from those which spore freely.

Now with regard to cross-fertilisation, "A. D." writes: "Certainly we have myriads of beautiful Ferns in commerce the products of cross-fertilisation." "A. D.," like many others, would like to know how this cross-fertilisation is accomplished. I must confess to being unable to throw much light on the matter. I very much doubt if there is any certainty about the numerous varieties we have being the result of cross-fertilisation, but would rather regard most of them as the result of natural variations of the same species.

Of the numerous varieties which have originated under my personal observation, all have been the result of chance seedlings. Many of our tasselled and crested varieties have been much improved by careful selection, and some have originated from a chance sport in one frond. *Nephrolepis pluma Bausei*, for instance, came from a few pinnæ taken from *N. pluma*, and other instances might be given where a small portion of a single frond has given a distinct variety. I am aware that it is recorded that certain well-defined varieties are the results of crosses between distinct species, yet during the thirty years that I have been intimately associated with Ferns and their culture, though I have made many experiments, I have never been able to be positive as to the results of sowing mixed spores or how to account for what appear to be Fern hybrids. Although it may be an open question, I very much doubt if anyone has been able to effect positive cross-fertilisation in Ferns.—A. HEMSLEY.

—The sentence in Mr. Hemsley's article on sowing Fern spores (p. 186) that "A. D." (p. 247) seeks to be enlightened on is quite plain to any

one who has had practical experience of raising Ferns from spores, as in many instances, at least, if the spores are taken from a plant standing in a mixed collection, in all probability some of its neighbours will have already ripened their spores, and from their minute size and lightness they are often distributed around for some distance. Thus a frond gathered from a plant standing in the midst of different kinds will frequently have the spores of many varieties deposited upon it, and in this way, if the spores are sown, a mixed crop often results therefrom. Some of the *Gymnogrammas* and several forms of *Pteris* are very apt to make their appearance in many pots, whatever may have been sown therein. Another caution to be observed to which Mr. Hemsley also directs notice is, when sowing spores to keep the pots as much isolated as possible. A good way of doing this is, if the prepared pots are at one end of the propagating house to carry out the actual sowing at the other end, fetching just the required number each time. If these cautions are observed and care is taken to wipe the hands after each sowing, the risk of mixture will be considerably minimised.—H. P.

FLOWER GARDEN.

GUNNERA SCABRA.

WHILE most people believe that this striking plant, as also the still larger *G. manicata*, should always be planted near to a pond or streamlet, where the roots indeed may actually be in touch with the moisture, it may be well to state that the preference of the species is not absolute in this respect. I do not say that the plant will attain to the same dimensions away from the water as it will when in touch with it, but it will make an exceedingly fine plant in a soil quite light and sandy, and one, moreover, heavily drained, with sand and gravel below. The finest single example I have ever seen thus treated was growing in the late Mr. Robert Parker's nursery at Tooting many years ago, where, quite removed and quite unaided by any permanent root-moisture, the plant attained to quite huge proportions in an open, sunny position in the nursery. The example must have had a spread of leaves of about 18 feet across, while the foot-stalk of the more erect leaf-blades would be perhaps between 5 feet and 6 feet. Of the size of the leaf-blades I have no information, though, judging by the size of the petioles and the spread of the plant, these would be of good size also. I am fully aware that much finer examples have been grown with moisture, and particularly of *G. manicata*. The point, however, that I have in view in penning this note is that any plant that will attain 12 feet across in a dry position such as that described is worthy of being more frequently tried in similar places, for in fine-foliaged plants at least we have nothing that will compare with these noble *Gunneras*. Because of the frequency of the statement that these *Gunneras* must have water, many who have it not refrain from attempting to grow them. At the same time, this constant root moisture is not always accompanied with success, and I have known instances where the plants quite refused to grow. In two of these, however, the soil beneath them has been a strong clay, quite adhesive and almost impervious to moisture. This, of course, may have been opposed to the well-being of the plants, and stagnation following, the result would be failure, and that quickly. Perhaps one of the items that tended to the success of the Tooting plant was the manner in which the majority of things took root in the fine sandy loam of which the nursery was largely composed. That being so, it only required a liberal dressing of manure to ensure a free growth, and with the plant established in such a soil, success was but a question of time. It would be interesting, moreover, to know the success attending the planting of the above *Gunnera* in moist places in England, and of others in drier places, if such exist. Of two plants that some years ago were in my own

charge, one was growing in the rock garden in full moisture, the other in a shady dell, with little moisture, where a heavy clay soil abounded. But neither the one nor the other made anything like the progress of the Tooting plant, and one at least was in what is usually regarded as an ideal spot for such things. I have more than once seen other plants that would form parallel instances; indeed, two such have occurred to me this year.

That such a fine plant is worth some care to make it a success all will agree, and I think that really handsome examples may be grown in light loamy soil with plenty of leaf-mould and some well-decomposed manure in quite open beds, as at Tooting. Planted in spring when frost had gone and well tended in the first year, so that the roots may get possession of the soil, the rest would only be a question of time and age. Of the age of the Tooting plant I have no information, but I believe I am correct in saying that it was never watered, even in hot, dry summers. Of this much I am certain, as the plant for some time was under my charge, and its size gradually increased each year. In some parts of Ireland the giant of all, *G. manicata*, appears to flourish grandly with moisture, assisted also by a naturally favoured climate. But I doubt if the equal of some of these famous examples could be met with even in similar positions in England. Is it, after all, not so much a question of water or moisture for a plant whose natural inclination is admittedly that way as it is of a more or less congenial climate, which cannot fail to be an influence for good in such a case? The instances of noble examples of this plant in England are rare; therefore one is constrained to look beyond the question of water in the production of fine examples in other and more favoured districts.

E. H. JENKINS.

National Dahlia Society—second exhibition.—On p. 269 of *THE GARDEN* Mr. A. Dean writes: "The poor array of new ones (*i.e.*, seedlings) and the few certificates granted lead to the inference that the primary object of the show resulted in failure, and it may well be questioned whether it is worth repeating." A few figures will suffice to prove the contrary, that as to its primary object—the awarding of certificates to new varieties that were not in fit condition on September 1—the show of September 19 was quite successful. There were staged for the consideration of the committee seventy-two seedlings, of which thirty-two were Cactus, twenty-one singles, fourteen show or fancy and five pompons. First-class certificates were awarded to four Cactus, two single, two show or fancy varieties and one pompon. Is not a total of seventy-two seedlings and nine certificates sufficient at such an exhibition?—J. F. HUDSON, *Hon. Sec.*

Victoria Asters.—I have never had these fine showy annuals so good as they are this season, and as I have also noted them especially good in almost every garden I have visited this year, I think we may take it that the seeds sent from the Continent last autumn were better than usual. Those who are in the habit of sowing their own seed know that if only the outer florets ripen the seed properly, those of the German or Quilled Aster are never so good as when the

whole flower ripens off, and those who wish to keep a strain true should sow early and finish the flowers in pots in the greenhouse. No plant pays for good culture so well as these Asters, and a good large flowering strain shows up better in beds and borders than small semi-double ones. A soil of medium texture enriched with well-decayed manure and well tilled is the best for them. The seed should be sown in March, and as soon as ready the seedlings should be pricked out 3 inches apart both ways into a frame or shallow boxes. Plant out finally at the end of May in large clumps of one colour, say eight or nine plants. This looks far better in the herbaceous or any other border than when they are planted in straight lines.—H.

POMPON DAHLIAS AT CHISWICK.

At the present time there is an extensive collection of pompon and Cactus Dahlias in the gardens of the Royal Horticultural Society at Chiswick.

kinds are decidedly good. Secondly, most of the colours can be found in varieties of first-rate quality, both as regards habit of growth and free-flowering, and the blooms are of good form and of small, or at any rate medium size. The day has gone past when any great improvement can be looked for in pompons. Changes will now be slow and gradual. Growers should go in for the small-flowered kinds and throw away freely from their collections all those with large or coarse blooms. If this were done everywhere, surely no words would be required to recommend or defend the pompons. The small pompons are essentially pretty, easy to grow, and useful either for the garden or as cut flowers. For cutting, their double character gives them lasting properties superior to the single or Cactus kinds.

The following varieties are well worth attention, and are arranged here in about the same order as we come across them at Chiswick: Nancy, good dwarf garden habit, is of a telling colour that many ladies would like—orange and



Mushrooms in an old wine cellar at Gunnersbury House. (See p. 275.)

The pompons are flowering freely, so that from an examination of the varieties to be found there it is easy to make a selection of what would probably be the best dozen or the best two dozen to grow if a small collection of them is desired. On the whole it can be said that the varieties sent from different nurseries are coming true to their character as we know them elsewhere, and seeing so many growing together it is easy to make comparisons. Most of the varieties that are in general cultivation, or that deserve to be generally cultivated, can be seen, those only excepted that have only just been sent out, and are therefore as yet too new to be considered as having passed beyond the trial stage.

Looking at the collection as a whole, two things are impressed upon us with respect to the pompons. Firstly, leaving out blue, which we do not expect in Dahlias, it is not easy to imagine a desirable colour which is not already represented, nor any combination of colours, for the fancy

red; Captain Boyton, one of the best dark kinds, colour maroon, shaded crimson, good form. Tommy Keith is very dwarf, flowers uniformly good, colour dark red, tipped white, fine variety both for exhibition and the garden; Ruy Blas is very distinct, crimson and purple, tipped white, weak centre, opens much too rapidly; Zoe, good in habit, is a well-formed fancy flower, very delicate combination of white and pale yellow, petals white, edged with yellow. Cecil, red, tipped with white, is a small, neat flower; Mars, one of the best scarlets, has medium-sized flowers, with good centre; Douglas, perhaps the best dark variety, is of splendid shape, dark maroon, shaded crimson; Phoebe is one of the best both for the garden and for exhibition, colour deep orange. Whisper, of very dwarf habit, has clear yellow flowers, edged with reddish bronze, excellent for all purposes; Arthur West, a dark crimson, is apt to come too large; Bacchus shares with Mars the distinction of being the best scarlet (it is of splen-

did form, but rather large); White Aster and George Brinckmann are the best white varieties (a new white with small, neat flowers is needed). Grace forms a dwarf bush covered with blooms, colour cerise; Nerissa is one of the very best yet raised, flowers small and of a novel soft rose colour; Fashion, an old variety, but one of the most effective colours in the garden, has intense orange blooms; E. Hopper is probably the best yellow, the flowers of perfect shape. Red Indian, deep rich red, is of fine shape (a very attractive flower); Florence Woodland, yellow, tipped bright red, is of good form, but a little large; Jessica, small, neat flower, good form, is amber, edged with red. Lilian is primrose, edged with peach, growth very sturdy; Ganymede, amber and fawn, shaded with pale lilac, is of excellent habit, shape of flower almost perfect; Orpheus is one of the best yellows.

For a collection of a dozen varieties, the following should be selected, on account of their small and perfect flowers: Ganymede, Jessica, Red Indian, Emily Hopper or Orpheus, Nerissa, Whisper, Phebe, Douglas or Captain Boyton, Cecil, Zoe, Tommy Keith, and White Aster.

J. F. H.

FLOWER GARDEN NOTES.

HARDY PLANT BORDERS.—It has been rather a curious experience this year on borders devoted to hardy plants, and writing at this date (September 19) one is able to give results throughout the year, and a hint as to work the outcome of that experience that will be necessary at no distant date. The past year has been notable for its prolonged drought. The earlier flowers, of which Pyrethrums, Doronicums, and Polyanthuses may be cited as examples, were good, but short-lived. If opportunity had offered to give them liberal supplies of water it would have been different, but this was not possible, and so the display was brilliant, but decidedly ephemeral. The borders were well done last autumn and a heavy dressing of cow manure worked in, a system of culture that in connection with a light soil would have given capital results. Unfortunately, however, the rainfall in the autumn of 1898 and the winter of 1898-99 was much below the average; it did not penetrate far enough to saturate the cow manure, except in those cases where this was worked in at a distance to benefit surface-rooting plants. Lower than this the manure turns up at the present time just about as it was placed into the trenches. Certainly it has helped all plants a little, but nothing like it would have done had the rainfall been up to the average. Of the dwarfier plants, possibly the Antirrhinums, Linarias, and Campanulas have given the best results, the display having been very good and well sustained. To these, however, must be added Gaillardias, that gave a splendid lot of bloom early in summer, and are now again well in flower with the aid of a surface mulching and a thorough soaking of water. Other things that will often throw a second lot of bloom, given similar treatment, have failed to do so this summer. The varieties of Coreopsis are capital dry summer plants, and have done remarkably well. A regrettable failure has to be recorded in the case of herbaceous Lobelias, and it is the more unfortunate because their brilliant foliage and handsome flowers are almost unique in hardy plants, and render them so acceptable for mixing with other things. They were late in breaking and nothing like so strong as one likes to see them. Growth was slow and poor, much of it gradually dwindling away, and not one plant out of ten was ever at its best. In the case of most of the things named where growth has not been satisfactory and that are not at present in a thoroughly healthy state, I shall make a clean sweep of them, preferring to start another season with healthy young plants obtained by seed, cuttings or division, and, so far as the two latter modes of propagation are concerned, the cuttings or offsets will certainly not be taken from miffy old plants. The two most reliable tall autumnal flowers—Starworts and Sunflowers—

have done remarkably well. They are flowering splendidly, apparently quite indifferent to drought, and plenty of bloom will be forthcoming until frost comes of sufficient severity to make an end of them. I have Sunflowers in many varieties, both double and single; the best single forms are most in request for cutting, although doubles, like multiflorus plenus and Soleil d'Or, are very fine for this purpose. Occasional clumps of very tall-growing sorts, as latifolius, remain in the borders, but I shall clear them out: they are more suitable for the wild garden. Writing of Sunflowers reminds me to suggest the advisability of more simple names. To the ordinary observer they are all Sunflowers, and when inquiries are made as to the particular name of a favourite, it would be well if one were able to give it as simply as possible. For instance, a lady was asking the other day the name of a certain variety. "I know it is a Sunflower or Helianthus," was the remark, "but should like its name." I was obliged to say that it was classed as a Helenium, and that the full name was H. grandicephalum striatum. Why all this for a simple hardy flower? There is an idea that, so far as Starworts and Sunflowers are concerned—and, indeed, many other hardy flowers—once planted they may be left for an indefinite time and will do well for a number of years. This may be so on some soils, but not here. Two seasons, or at the most three, are quite enough for them. I should say they are at their best the second season, and that after this they begin to deteriorate.

In the matter of autumn flowers do we make quite as much use of hardy Fuchsias as their merits deserve? I am led to the suggestion by a border just now about at its best mainly devoted to Fuchsias and Starworts. It is about 9 feet wide, with a wall and a big Wistaria as a background. The clumps of Fuchsias were planted some towards the back and others about 3 feet from the edge, blocks of Starworts being filled in afterwards in different heights to complete the arrangement. It has a very telling effect just at present, the contrast being clear and well defined, and yet soft and pleasing. Besides the pleasing display, it is a border from which cut bloom in great abundance can be obtained for tall vases.

Claremont.

E. BURRELL.

NOTES FROM A SWISS NURSERY.

THINKING that a visit to M. Froebel's nursery would well repay me the additional journey necessary to reach Zurich from the central parts of the Alps, I managed to include it in my homeward journey. M. Froebel is keenly interested in all matters horticultural, and almost everything in his nursery bears unmistakably the mark of quality—the best varieties everywhere. The first thing one sees on entering the gate is a fairly large tank filled with some of the best varieties of M. Latour-Marliac's hybrid Water Lilies flowering freely and growing vigorously. I have not seen them doing so well in a nursery before. They are planted here for effect, but are also found to be most useful for cutting, finding a ready sale. There was a really fine display of cut blooms of the red varieties to be seen in the window of M. Froebel's shop in the main street of Zurich—the Bahnhofstrasse. English florists might well follow this example and use Water Lilies more. The new varieties are free-flowering, and the colours, white, pale yellow, pink, and red, can be mixed very well with one another. The different kinds flourishing in the tank are now well known and have often been described in THE GARDEN, so they need not be referred to in much detail now. N. Laydekeri rosea was very fine, and N. fulva appeared to produce flowers in accordance with the description of it in the lists of Latour-Marliac—ground colour yellow, flushed with rose or pink, a combination which I cannot admire as seen on the petals of N. fulva. As the blooms of this variety do not seem to come true in this country, one wonders whether the difference can be accounted for by climatic influences. In one corner of the tank was to be seen a plant

of N. Froebeli, the only hardy red variety that has been raised in Europe outside of the establishment of Temple-sur-Lot. The flowers were of medium size and dark carmine in colour. The petals are narrower than in several of the French varieties, more numerous and more refined in shape; in point of colour there is not much difference. The flowers resemble those of the odorata section rather than the Marliacea section of M. Latour-Marliac's varieties. It is a seedling from the Norwegian Water Lily, N. alba var. rosea. There being no pond here, the tub system of growing and propagating the Nymphaeas is adopted and is quite successful. N. stellata and its varieties are to be seen growing in tubs in the open air without any protection or warm water being provided, and they have been cultivated in this way at Zurich for years past. A large number of N. s. zanzibarensis seedlings were in flower planted out in an ordinary brick-built pit that had been rendered water-tight and filled up with the necessary soil. If it be considered desirable to shelter them a little, all that is required is to replace the light in its usual position. Nelumbiums have been grown in this way, but M. Froebel has not succeeded in flowering them out of doors. Eichornia (Pontederia) crassipes and Eichornia corulea were in flower in the tank before mentioned. Both varieties require protection in the winter, but are well worth the attention then required when they can be induced to flower like this in the open air. The former bears large spikes of pale blue flowers, conical in shape, each bloom more than 1 inch in depth and breadth. The shade of colour is peculiarly attractive—much more so than that of most blue flowers. The plant itself, floating freely as it does on the surface of the water without taking any hold of the soil, is of unusual interest to those who see it for the first time. The latter variety, commonly called the Water Hyacinth, possesses similar spikes, but of a much darker and less fascinating colour. Pontederia cordata was also in flower and is quite hardy. It will grow in any English pond, but is very insignificant when compared with the tender varieties. That pretty yellow-flowered aquatic, Limncharis Humboldtii, was blossoming in the same tank with considerably greater freedom than it does in this country. I also noticed Trapa natans and Trapa verbonensis, two water plants that deserve more attention than they have hitherto received. These particular varieties are hardy, and their handsome foliage and great distinctness at once engage the attention. The leaves, produced in pretty rosette-like clusters, are of a brownish chestnut hue, marbled like the leaves of some of the hybrid Water Lilies. Small hard berries or nuts are produced; hence T. natans is called the Jesuit's Nut, or Water Chestnut. It is found distributed over Southern Europe and parts of Asia and Africa. T. verbonensis is a variety that is found in Lago Maggiore, in North Italy.

One of the most striking novelties that I saw was a double pink Rosa rugosa called Conrad Ferdinand Meyer. The blooms are large, quite double, and well formed, not unlike those of La France. This is a great addition to the rugosa class of Roses. Another new Rose that promises well is called Eglanteria remontant; it is a variety of the Austrian Brier, but the petals are coloured with pink on the yellow ground of R. lutea. Its value is increased by the fact that it flowers twice in the year. I should call it R. lutea bicolor. Johanna Sebus is a new Hybrid Tea Rose that is highly thought of here. The stock which is used is Rosa laxa (Siberia), which appears to be quite free from the fault of producing suckers. Amongst the

HARDY HERBACEOUS PLANTS

I noted a particularly fine and healthy-looking stock of Rudbeckia purpurea and Gentiana asclepiadea, a very useful dark blue variety. Other autumn-flowering hardy plants with blue flowers are Amasonia angustifolia and Veronica noveboracensis, coming at a time when blue is welcome. Lilium Henryi was making a grand display; the individual heads of flowers would form

an addition to any garden. A fine lot of bulbs of the rare double white Autumn Crocus (*Colchicum autumnale album plenum*) was being planted out and would make a fine display soon. The Hellebores were making vigorous growth, and *Incarvillea Delavayi* had been in flower. Mention should be made of *Arenaria Rosani*, a variety which forms very dense dark green clusters, and is most useful for covering up dry places or for a rock garden.

Some old Pomegranates in tubs were just coming into flower, and gave promise of making a fine display. When about to flower water is very freely given, and they are fed as well. There is a large stock of well-grown young standard trees, with heads about 18 inches through, in the open ground. The shrubby stove plant, *Medinilla Curtisi*, introduced about fifteen years ago, is strongly recommended by M. Froebel as preferable to *M. magnifica*. It is almost always in flower and is dwarf in growth. I noted, too, that rarely-seen but handsome winter-flowering plant, *Euphorbia jacquiniiflora* (syn., *E. fulgens*).

There is not much space left to devote to the Orchids, though there is an interesting collection. *Vanda cœrulea* is well represented both in quantity and quality. The plants are strong and healthy, growing in a sunny position, where they get plenty of air. Beside them *V. Kimballiana* flourishes. This variety, M. Froebel thinks, is usually grown in too much heat. I also saw some good plants of *Vanda Sanderiana*, some being in flower, and one a very fine variety. The Mexican Orchids, *Lælia anceps*, *L. superbiens*, *L. furfuracea*, &c., seemed to thoroughly enjoy the treatment given to them. They were growing with much shade and plenty of air, and could be left entirely in the open air, if desired, during the night by taking off the lights and shading. The result is great freedom in flowering. I noticed *Epidendrum radicans* growing practically in the open air along with *Clianthus Dampieri*. For cool Orchids the summer is the most difficult time at Zurich. It is not easy to keep them cool enough. *Oncidium ornithorrhynchum* was good, also the *Masdevallias*. *Miltonia vexillaria* is allowed an abundant supply of air, and *M. Phalenopsis* was true to its character of being always in flower. *M. v. Lehmanni* is a fine variety, pinker than the type, and quite distinct. *Zygopetalum celeste* and *Z. Lehmanni* must be mentioned as two Orchids that are well grown by M. Froebel.

VISITOR.

Agapanthus umbellatus in the open.

—Blue-flowering plants are so few in the garden in the early autumn that this plant, which each year blooms with unerring regularity, is always welcome. And what is true of the ordinary form is equally so of the larger flowered varieties, one of the best of these being *A. n. maximus*. There are other forms, however, known as *major* and *giganteus*. The variety *giganteus* has flowering stems each fully 3½ feet high, often more when the plants are given good treatment and not merely watered occasionally. The great heads of blossom often contain something approaching 200 buds. Too often, however, the plant receives but the merest support for its great mass of fleshy roots and huge tuft of leaves. Being somewhat tender, the plants have to be housed during winter or protected from frost. This is no reason for confining all the stock in large pots or tubs, the former of which are sure to burst by the very pressure from the roots of the plant. A portion of the stock should be planted out in deep soil each year, and in a suitable spot a fine effect would be secured. The white form, which is more deciduous, is also more hardy, and with good covering may be left out during the winter. This is certainly a gain to the outside garden, though, all things considered, the blue-flowered kind is, perhaps, the finer garden plant for general purposes.

LILIUM NEILGHERRENSE.

I HAVE found on my return home that the Lily which has done so exceptionally well in my garden this summer is not *L. Wallichianum superbum*, as I imagined it to be, but *L. neilgherrense*, which is more remarkable still, as it is generally supposed to require greenhouse culture, and is, indeed, given in this way in the interesting catalogue which has been lately issued by Messrs. Wallace, of Colchester. Of course, the Isle of Wight has great advantages to offer, but I cannot help thinking that some of these Burmese Lilies have special qualifications of their own which are not sufficiently recognised—e.g., Mr. Wallace

neilgherrense still at their best and still giving a delightful reminder of the summer that is so fast slipping away from us? I cut some of these blossoms and sent them to London a day or two ago. The last Lily of summer is as valuable in its way as the last Rose of summer, and where you can meet with a Lily towards the end of September it is a much more uncommon event than if twenty Roses had put in an appearance.

I feel sure that if the season had been of an average description this year and more rain had fallen, my Burmese Lilies would have been better even than they are. I wondered when I came back to my garden the other day and saw the arid



Water Lilies at Gunnersbury House. (See p. 275.)

asserts with regard to *L. Wallichianum superbum* that it "takes front rank," and he gives as his reason for saying so that "it is easily cultivated, hardy, and very prolific." What more could be said about a Lily than that? It would be difficult to say as much of *L. auratum*, and as for a handsome appearance, these Lilies from Burmah will hold their own against the productions of Japan, North America, or elsewhere. Owing to absence from home during the greater part of the year I have missed the flowering season of some of the best of my Lilies; but what could be more satisfactory towards quite the end of September than to find the extremely beautiful blossoms of *L.*

waste which it looked to be that any plant or bulb could exist in it at all. H. EWBANK.

St. John's, Ryde.

NOTES AND QUESTIONS.—FLOWER.

Tufted Pansy Mrs. A. H. Beadles.—This new Pansy has been flowering well during the present season. During the great heat when there was an absence of rain the plants blossomed profusely, and at the present time the display they are making is very pleasing indeed. The flowers are large and somewhat circular, pure white, and faintly rayed.

The growth is dwarf and vigorous and the constitution robust.—C. A. H.

Gentiana asclepiadea deserves to be much more generally grown in gardens as a late summer and autumn herbaceous plant. It will grow in almost any position or soil, though moisture suits it best, as may be seen at the present time by a visit to the Kew rock garden, where this variety is displaying itself to great advantage and in considerable quantity. In height it varies between 1 foot and 2 feet according to its position. Its continuous blooming renders it valuable, the flowers succeeding one another in pairs up the stem over a considerable period. It is a good variety to plant in shrubby borders or to naturalise in wild gardens, or even in woods in large quantities. There is a white variety as well as the blue one.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY'S FRUIT SHOW.

CRYSTAL PALACE, SEPTEMBER 28, 29, 30.

THERE was again a really grand display of fruit of British growth, variable in quality as compared with previous exhibitions in some instances, it is true. In Grapes there was a perceptible falling off in several classes, notably in the smaller collections of varieties and in the Muscat class. Some growers have had their Grapes, so to speak, rushed on owing to the hot weather; hence in many cases, no doubt, they were past their best. The one Grape above others to hold its own was Mrs. Pince's Black Muscat. Another class well filled was that for Alicante, whilst in the any other white class Dr. Hogg was staged in first-class condition. The quality of the fruit in the mixed competitive classes for collections was quite equal to other shows. In the class for nine varieties there was but little difference between first, second, and third. The competition was not so keen in the large class for outdoor fruits as last year, it being practically useless to think of competing with success against the more favoured of the Kentish growers. Where there were five exhibits last year there were only two this time. The competition was not any too keen in the divisional classes, i.e., those for various parts of the country. These, above all others, ought to be filled, affording as they do some data to form more correct opinions as regards the several districts. The market classes were well represented, showing a decided improvement upon last year both in quality of fruit and in the methods of packing for market. This section of the schedule is an excellent one, and deserves well of fruit growers for market supplies. The nurserymen's classes, i.e., those who grow trees, &c., for sale, were also well filled, occupying, as they did, a large amount of table space. With the exception of the grand Pears from Jersey, the Pears in these classes were not up to the average, but the Apples were fully so. Various methods were adopted for displaying the fruit, and a very fine display was made, reflecting great credit upon the trade who supported the show. The classes open to private growers only from all parts of the country brought together some of the finest produce in the show. Both the Apples and the Pears in these classes from Kent and the most favoured of other counties were grand examples of culture; finer fruits of the best known kinds than those exhibited could scarcely be desired. Outdoor Peaches, Nectarines and Plums were scarcely so numerous as last year, but here again the quality was of the best, far better in some respects than many would have expected after the very trying weather and drought. Orchard-house fruits were very fine indeed from the well-known sources. Apples, Pears and Plums as trees in pots were fine examples of culture, and so were the picked fruits. Growers of orchard-house fruit should keep strictly to dessert kinds. There cannot be any possible good in growing a few of the largest of cooking Apples in pots just for a show and nothing more. Peasgood's Nonsuch Apple, it should be noted, when so grown becomes a des-

sert fruit; not so many others, as *Gloria Mundi*, &c. The show on the past occasion was rather confined in space, owing no doubt to the exhibition of crafts in the other transept; this, however, was quite unavoidable, and in no way reflected upon the executive of the Royal Horticultural Society.

The schedule as at present drawn up requires some modification in the Apple classes. For instance, small, highly coloured fruits of Blenheim Orange and Gascoigne's Scarlet are asked for; thus small-sized fruit ruled in these classes, but in some others the opposite was the case. These Apples should, in our opinion, have two classes provided for each variety, so that large fruits could be staged in the one if not in the other.

DIVISION I.—FRUITS GROWN UNDER GLASS OR OTHERWISE.

For a collection of nine dishes of ripe dessert fruit, Lady Henry Somerset, Eastnor Castle, Ledbury (gardener, Mr. Mullins), was placed first in a close competition. The Muscats here were a strong dish, the colour and finish excellent; Gros Maroc, the other Grape, had size and colour to recommend it; Albert Victor Nectarines were extra fine, but Lord Palmerston Peaches were a weaker dish; Pitmaston Duchess Pears made an imposing dish, being also well ripened; Barrington Peaches were extra fine, so also were the Ribston Pippin Apples; a well-coloured Melon finished up this exhibit. Sir Joseph Pease, Hutton Hall, Guisborough (gardener, Mr. McIndoe) was well up for the second place. The Grapes here were not so good, but the Queen Pine made up for that deficiency; other first-class dishes were Sea Eagle Peaches, extra good; Souvenir du Congrès Pears, a strong dish; Prince of Wales Peaches, large and highly coloured; these, with Bryanston Gage and Reine Claude de Bavay Plums, made up a capital exhibit. The Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. Goodacre), was placed third; the Grapes here were first-class, having quality in both dishes (Muscats and Mrs. Pince's Black). Other excellent dishes were Brown Turkey Figs and Coe's Golden Drop Plums. For a collection of six dishes of ripe fruit, Colonel Walpole, Heckfield Place, Winchfield (gardener, Mr. Maxim), showed well and deservedly won the first place. Muscats here had the deep amber tint so desirable, Cooper's Black (alias Gros Maroc) being the other choice; these also were fine. Nectarine Peaches were extra fine also; Lady Sudeley Apples were also attractive. Mr. Biddulph, Ledbury (gardener, Mr. Dawes), was placed second, his best exhibit being extra fine Gros Maroc Grapes, probably the best shown, with excellent Muscats, Ribston Pippin Apples, and Williams' Bon Chrétien Pears.

In the large class for the best six varieties of Grapes, where the first prize embraces a silver challenge cup of the value of twenty-five guineas, with the stipulation that it is to be won three years in succession (a stupid and unreasonable condition), Mr. Goodacre was a comparatively easy first. The varieties were Gros Maroc, well finished, but this is no difficulty even for an amateur to accomplish; Alnwick Seedling, also in fine condition; Muscats, extra fine, with large berries; huge bunches of Barbarossa, well coloured; Mrs. Pince's Black, extra fine in berry and bunch, with Alicante to complete the number. Mr. Bayer, Tewkesbury Lodge, Forest Hill (gardener, Mr. Taylor) showed up bravely for second place, and were all the conditions equal he would have pressed his antagonist hard. The best dishes here were Gros Colman, well finished; Mrs. Pince, which lacked colour, bunches, however, fine; Alicante, a strong lot; Muscats, excellent; and Madresfield Court, extra good in colour and fine in berry, with Gros Maroc to complete the exhibit. Only one exhibitor appears to have entered for the three varieties, but as regards finish it was all the same a very strong lot in every respect. The varieties were Muscat, long, tapering bunches, highly coloured, Gros Maroc, and Alicante. These were staged by Mr. Dawes. The single dish classes were, on the whole,

disappointing and do not call for any lengthened comment. Some fine dishes, it is true, were staged, but in these instances the best far out-distanced the others. For Black Hamburgs, Mr. Fleming, Chilworth Manor, Romsey (gardener, Mr. Mitchell), was easily first with well-coloured bunches with medium berries; second, Sir George Russell, Swallowfield Park, Reading (gardener, Mr. Cole). For Madresfield Court Mr. Mitchell repeated his success, staging grand bunches quite in the old style, Mr. Taylor coming in second. For Mrs. Pince Mr. Mitchell again won, and that quite easily, with superb examples in every respect, Mr. Taylor again following. Mr. Goodacre was the only exhibitor of Muscat Hamburg, showing medium bunches. Alicante was a strong class, Lord Suffield, Gunton Park, Norwich (gardener, Mr. Allan), being placed first with perfect bunches. Mr. Cole followed, also staging fine produce. Mr. Mitchell won for Lady Downe's again, and once more staged a strong lot, large bunches, highly coloured; Mr. Taylor once more having to be content with second place. Mr. Allan staged Gros Maroc in the class for any other black of first-rate finish and fine in berry, being followed by Mrs. Tulk, Cowley House, Chertsey (gardener, Mr. Sadler), with the same variety. Muscat of Alexandria was a case of "first" and the rest nowhere. Mr. Lucas, Warnham Court, Horsham (gardener, Mr. Duncan) staged very fine bunches, well coloured, and deservedly won. For Mrs. Pearson the judging requires some explanation, the first prize being awarded to the largest bunches, it is true, but these were not well coloured or so fully ripe as is desirable; in fact, it is doubtful if they would thoroughly finish. The first prize went to Mr. Baker, Ottershaw Park, Chertsey (gardener, Mr. Osman); second, Mrs. Wingfield, Amptill, Beds (gardener, Mr. Empson), who had the highest coloured, the largest berried and the best ripened examples. In the class for any other white, that excellent Grape, Dr. Hogg, was shown in the best possible condition, and when so staged it is at this season of the year a rival to the Muscat; these were put up by Mr. Osman; the second prize went to Foster's Seedling, from Mr. Cole.

Mr. Maxim was first for Peaches, with grand samples of the Nectarine Peach highly coloured, and Mr. Mitchell second with Sea Eagle of large size. For Nectarines, Mr. F. W. Thomas, Man-nock, Polegate, Sussex, was first with Spenser, and Sir M. Samuel, Mote Park, Maidstone (gardener, Mr. Bacon), second with Victoria. With Plums in three varieties, Mr. Leopold de Rothschild, Gunnersbury House, Acton (gardener, Mr. J. Hudson), was first with highly finished fruit, quite characteristic of orchard house culture in pots. The varieties were Transparent Gage, Golden Transparent Gage, and the rosy coloured sport from Coe's Golden Drop. Mr. McIndoe was second, his varieties being Reine Claude de Bavay, Bryanston Gage, and Late Transparent, all fine fruits.

HARDY FRUIT—GARDENERS AND AMATEURS.

For the collection of hardy fruit, thirty-six dishes, Mr. R. Potter, The Gardens, St. Clere, Kemsing, Sevenoaks, this year, as last, took the premier award. The council for some reason had this year reduced the number of varieties to thirty-six instead of fifty. We do not see the necessity, as last year there were six excellent collections and only two this. Pears and Apples were the principal dishes, and with so great a number of classes for these fruits we think more variety could be shown. The second place was taken by Mr. T. Dawes, Biddulph Grange, Ledbury. For twenty-four dishes of orchard house grown fruit, Grapes excluded, the fruit differed but little from that grown in the open. There was only one competitor, Mr. R. Potter. We fail to see the need of this class when such grand produce from the open as was staged in other parts of the building was to be seen. Far better give a few third prizes in the excellent single dish classes.

DIVISION II.—NURSERYMEN ONLY.

In the following four classes many hundreds of dishes were staged, these occupying the three

centre tables in the building. We certainly think these exhibits could with advantage have been curtailed. The premier position, gaining the gold medal, was obtained by Messrs. G. Bunyard and Co., who staged no less than 300 varieties of fruit, mostly Apples and Pears. It is impossible to enumerate anything like this number or comment upon such a splendid exhibit. The centre was raised with highly-coloured fruits in sections, mostly dessert varieties. Grapes growing on the Vines were arranged with Smilax and Ferns. Also included were Medlars, Black Currants, Bullaces and Plums. The Messrs. Veitch, Ltd., Royal Exotic Nurseries, Chelsea, came next with twenty-five large baskets of Apples and 130 varieties in dishes and 100 varieties of Pears. A nice basket of the new St. Joseph Strawberry with fruit on the plant with the new Gunton Orange Melon were shown, but these fruits were not grown in the open, as stipulated by the schedule. In this lot were some very choice dessert Apples, as American Mother, Bijou, Rouge Précoce, and Cox's Orange. The cooking Apples in many cases were excellent, though lacking the colour of the Kent fruits. A silver-gilt Knightian medal was awarded. Messrs. Laing and Sons, Forest Hill, staged in this class, but they had not adhered strictly to the schedule, and had introduced pot trees and Vines in pots. At the time of making our report no award was given. Mr. H. Berwick, Sidmouth, Devon, was the other exhibitor in this large class, and a really commendable exhibit it was, Ferns, Palms, and Lilies being used freely as decoration for centres and corners. This exhibit well deserved the silver-gilt Banksian medal awarded, as the colour of the fruit was astonishing. The next class brought out seven competitors, each having about 180 feet of space, and several very excellent collections were staged. Mr. J. B. Colwill, The Nurseries, Sidmouth, having splendidly coloured fruit (silver-gilt Banksian). Messrs. Paul and Son, Cheshunt, staged a good collection of Apples and some Pears, the whole well arranged and representing the best varieties (silver Knightian medal). Messrs. Cheal and Sons, Lowfield Nurseries, Crawley, had a beautiful lot of fruit, Apples mostly, including some excellent dessert kinds, and well merited the silver medal awarded. Mr. J. Watkins, Pomona Farm Nurseries, Hereford, staged in this class and well deserved the silver Knightian medal awarded for the collection, which was noteworthy for the fine colour and finish of the fruit. Here were some of the finest Medlars in the building, the variety being the Dutch Monstrous. Messrs. Peed and Son, Roupell Park Nurseries, S.E., staged 100 dishes of Apples of good quality, and were awarded a silver Knightian medal. Messrs. R. Smith and Co., Worcester, staged fewer dishes than the others, but none the less interesting. The Jersey Agricultural and Horticultural Society had a large collection of fruit, mostly Apples and Pears. The centre was formed of dot plants of huge Cabbage stems some 11 feet high, and not at all ornamental in a collection of fruit, as the fading leaves had an untidy appearance. Here were the largest Pears in the show, including Durondeau, Chaumontel, with some excellent dishes of Apples. One, *Pride of England*, is a nice looking fruit. There was also a collection of Melons grown in the open. This was an interesting exhibit (silver-gilt Knightian medal). Mr. G. Mount, Canterbury, showed in this class some good fruits, mostly Apples and Pears, with Plums. Baskets of well coloured Apples formed the centre of the exhibit, the varieties being well-known cooking kinds (bronze Banksian medal). In Class 23 there were six competitors, who showed some excellent produce. The leading position was gained by Mr. J. Basham, Fair Oak Nurseries, Newport, Monmouth. One hundred dishes of distinct varieties were staged, well meriting the silver-gilt Banksian medal awarded. Messrs. Spooner and Sons, Hounslow, also staged 100 dishes of fruit. These lacked the size of the Kent fruit, but, considering how near they are the metropolis, they

were most deserving of the award given—a bronze Knightian medal. Messrs. Pewtress Bros., Tillington, Hereford, staged an excellent collection of Apples and Pears, receiving a silver Banksian medal. Messrs. Brown, Stamford, set up some excellent fruits nicely arranged, having fine Barnack Beauty and some seedling Apples, a good lot of September Beauty, and some good Pears (silver Banksian medal). The Messrs. Rivers, Sawbridgeworth, in addition to their fine collection of fruit in Class 24, staged in this class, and had some very beautiful fruit, well meriting the silver Knightian medal awarded. Mr. W. Taylor, Hampton, had a stand of his new Grape *Reine Olga* from open-air Vines. The berries were well coloured (bronze Knightian). Mr. R. C. Notcutt, Woodbridge, Ipswich, had a smaller collection of fruit. Good here was the Pear given an award last March, *Winter Orange* (bronze Knightian medal). For orchard house fruit and trees there were two competitors—the Messrs. Bunyard and Rivers, the former securing the gold medal, having more fruits and in greater variety. The centre of the stand was trees fruiting in pots. The dishes here were a strong feature, especially the Apples. *Walburton Admirable*, *Sea Eagle*, and *Nectarine Peaches* were good. Messrs. Rivers had more pot trees, and received the Hogg medal. Plums in pots were a strong feature.

DIVISION III.—MARKET GROWERS.

For white Grapes, not less than 12 lbs. in a baby basket, there were three entries, Mr. W. Iggulden taking the premier award with good Muscats, Mr. W. Green, Harold Court, Essex, being second. Far greater interest was shown in Class 27, for any variety of Grape in any other package. Here the competitors changed places, Mr. Green being a good first, having a handled basket crossed over with twigs, the variety being *Gros Colman*. Mr. Iggulden, Frome, was second with the same kind of basket. For cooking Apples, four varieties, 42 lbs. in a basket or box, Messrs. W. Poupart and Son, Twickenham, were first, sieves being employed, each fruit packed in paper; Mr. Basham being second, using boxes and wood-wool. For 20 lbs. dessert Apples, Messrs. Poupart were first with the same kind of packing. Mr. A. Wyatt was second with fruit in boxes. For cooking Apples, any one variety, Mr. G. Tebbutt, Isleworth, was first with good *Lady Henniker* in sieves, the fruit packed in paper, Mr. A. Wyatt being second. For 20 lbs. of dessert Apples, one variety, Messrs. Poupart were first with Cox's Orange in half sieves, each layer of fruit having paper with wood wool lining the basket, Mr. O. Marchant being second with Worcester Pearmain. For an improved form of packing for market, Mr. Basham was first, the packing wood wool, the fruit in three layers. Mr. Basham was the only exhibitor of 42 lbs. of Apples to show an improved system of packing. This was similar to the last class, hampers or flats being used. Messrs. Poupart were first for Pears; Mr. Wyatt second, with no packing between the fruits. For one variety of Pears Mr. Wyatt was first with fruit in boxes packed in wood wool. For twelve varieties of Apples and six of Pears, each to be laid on the table without dishes or baskets—and this certainly does not need repeating, as side by side with the single dishes the varieties staged bore no comparison—Messrs. Poupart were first. For Plums (cooking), 28 lbs. in boxes or baskets, Messrs. Poupart were first, and Mr. Tebbutt second. For twenty-four Peaches packed in a suitable box, Mr. J. Gore, Polegate, was first with *Sea Eagle* in long boxes, paper and wood wool being placed round each fruit. For 12 lbs. of Tomatoes packed in a box or basket, Mr. J. Gore was first, using a cross-handled basket, with paper between each layer of fruit.

DIVISION IV.—FRUITS GROWN IN OPEN AIR—(GARDENERS AND AMATEURS ONLY.)

Mr. McKenzie, Linton Park Gardens, Maidstone, won the premier award for twenty-four dishes of sixteen cooking and eight dessert

Apples. We have seen larger fruits in a few cases, but not better in quality. Mr. Parker, Goodwood Gardens, Chichester, was second, he having splendid Grenadier and the best dish of *Lady Henniker* in the show. In the class for twelve kinds, Mr. A. Maxim, Heckfield Gardens, Winchfield, was first, Mr. G. Mullins, Eastnor Castle Gardens, being second. Only four competed in the class for nine dishes. Much the same varieties were staged, Mr. Dawes being a good first, Mr. W. Jones, Wallington Bridge, Carshalton, being second. Five staged in the class for six dishes of cooking Apples; first, Mr. Hurnard, Gurney's Manor, Norfolk, Mr. R. M. Whiting, Credenhill, Hereford, being second. For three dishes of cooking Apples, Mr. G. Fennell was first, having excellent *Castle Major* and *Lord Derby*. There was a great falling off in the class for six dishes dessert Apples, only two lots being staged, Mr. King having a grand lot of *Ribston*, *Allington*, and *King of the Pippins*, with *Blenheim*, Cox's Orange, and Worcester Pearmain, Mr. H. Cook, Knowle Gardens, Sidmouth, being second. For three dishes of dessert Apples no less than fifteen competed, Mr. G. Sage, the Gardens, Bayham Abbey, Lamberhurst, being first with highly-coloured fruits of *Washington*, Cox's Orange, and *Ribston*. For dessert Pears, twelve dishes, Mr. R. Potter was placed first, but afterwards the award was withheld. Mr. A. Bacon, Mote Park Gardens, Maidstone, was second. For six dishes Mr. Sage was first. For three dishes, Mr. R. Edwards, Beechy Lees, Sevenoaks, was first. For cooking Pears, Mr. Humphreys was first with *Catillac*, *Triomphe de Jodoigne*, and *Uvedale's St. Germain*. For a single dish Mr. Potter was first with *Bellissime d'hiver*. Peaches grown in the open brought forth a good array of fruits. Mr. J. Sparks, Upper Grove House Gardens, Putney, was first with good *Sea Eagle*, *Princess of Wales*, and *Late Admirable*, Mr. S. Osborn, East Sheen Lodge Gardens, being second. For a single dish, Mr. G. Wythes, Syon House Gardens, Brentford, had the best dish, the variety being *Sea Eagle*, of beautiful colour and the fruits large, Mr. Slade, Poltimore Park Gardens, Devon, being second with *Princess of Wales*. There were eleven competitors in this class. For one dish of Nectarines, Mr. Sparks was first with *Victoria*. For Plums, four dishes, Mr. Folkes was first with good *Jefferson*, *Washington*, *Reine Claude de Bavay*, and *Cloth of Gold*. Only three lots were staged. For one dish, not Gages, any variety, Mr. T. Spencer, Goodrich Park Gardens, Ross, Hereford, was first with a good dish of *Golden Drop*, Mr. Wright, Walcot Hall Gardens, Stamford, being second with the same variety. For Gages, Mr. J. Duncan, Warnham Court Gardens, Hershham, was first, Mr. Rich, Ross, being second. Mr. McIndoe was first for cooking Plums, four dishes, having grand *Archduke*, *Grand Duke*, *Magnum Bonum*, and *Pond's Seedling*, Mr. H. Folkes second out of three entries. For one dish, Mr. E. Coleman, North Frith, was first with excellent *Pond's Seedling*, Mr. Hurnard second. For Damsons, Plums, or Bullaces only two staged, Mr. Clinch, Sittingbourne, being first, Mr. Fennell second.

DIVISION V.—COUNTY CLASSES.

The prizes offered to growers in separate counties and groups of counties were competed for with considerable spirit. Kent was represented by four collections in each class. In both cases the judges must have had considerable difficulty in making their awards. Mr. G. H. Dean, of Whitehall, Sittingbourne (gardener, Mr. W. T. Stowers), was first with an even and good collection. His best cooking kinds were *Lane's Prince Albert*, of which he had an excellent dish, and *Peasgood's Nonsuch*. In the dessert varieties he was weaker. For second place, Mr. G. H. Sage, gardener to the Marquis Camden, put up a very nice collection, and his Cox's Orange Pippin in the dessert kinds was very fine. *Peasgood's Nonsuch* was shapely, but not particularly large. The last-named exhibitor was given first

place for Pears, and his fruit was excellent. The best dish was undoubtedly a splendid one of Gansel's Bergamot, a useful Pear not often staged in such fine condition. Mr. R. Edwards, gardener to Mr. G. H. Field, Baechy Lees, Sevenoaks, had a very fine even lot for second place. Doyenné du Comice and Marie Louise were especially well shown. The next batch of southern counties covers a lot of good fruit-growing country, including as it does Surrey, Sussex, Hants, Dorset, Somerset, Devon, and Cornwall, and although we missed one or two well-known exhibitors from this neighbourhood, there was still a very strong competition, six collections of Apples and four of Pears being shown. The Duchess of Cleveland, Battle Abbey, Sussex (gardener, Mr. W. Camm), was placed first for Apples, a good clean-looking collection. The second prize lot was put up by Mr. King, gardener to Mr. Jeremiah Colman, Gattton Park, Reigate. First place for Pears was well won by Mr. W. Mancey, gardener to Mr. A. Benson, Upper Gattton Park, Merstham, who had very fine Durondeau, Marguerite Marillat, and Souvenir du Congrès. The second prize collection from Mr. J. Colman, of Reigate, was rather irregular, but contained very fine Doyenné Boussoch and Souvenir du Congrès. Wilts, Gloucester, Oxford, Bucks, Beds, Herts, and Middlesex were the next batch of counties, and here in the Apple class Mr. W. Strugnell, gardener to Colonel Vivian, Rood Ashton, Trowbridge, was successful. Mr. Lonergan, Cressingham Park, Reading, came next, his gardener (Mr. Chamberlain) having an excellent lot of fruit, including finely-coloured Alexander and Cox's Pippin. For Pears, Mr. W. A. Cook, gardener to Major Henage, Compton Bassett, was first, Mr. Chamberlain being an extremely close second. In the Essex, Suffolk, Norfolk, Cambridge, Hants, and Rutland districts there were three collections of Apples and the same number of Pears shown. Here again there was very little to separate the first and second prize collections of Apples. Mr. H. Hurnard, of Gurney's Manor, Higham, Norfolk, was first, and he was followed by Mr. Andrews, gardener to the Hon. W. Lowther, Campsey Ash, Wickham Mark, who had superb cooking fruits, but his dessert kinds were rather small. Mr. W. Allan, gardener to Lord Suffield, Gunton Park, had a splendid collection of Pears for first place. All the dishes here were good. Mr. Andrews, of Campsey Ash Gardens, followed closely, his best dishes being Durondeau and Doyenné du Comice. The counties of Lincoln, Northampton, Warwick, Leicester, Notts, Derby, Stafford, Shropshire, and Cheshire were not particularly well represented, nor was the fruit of a particularly high order of merit. Mr. A. Wright, gardener to Mr. J. W. Dearden, Walcot Hall, Stamford, and Mr. W. H. Divers, gardener to the Duke of Rutland, Belvoir Castle, Grantham, took first and second prizes respectively both for Pears and Apples. As to Pears, Mr. Divers certainly had the finest lot as far as quality was concerned, but the judges marked his Beurré Clairgeau "not a dessert Pear." It is not a first-rate kind by any means, but it figures in many lists of dessert kinds, and it was doubtless due to this variety that the Belvoir fruit was placed second. Louise Bonne in this collection was also extremely good. Hereford, Worcester, Monmouth, Glamorgan, Carmarthen, and Pembroke furnished undoubtedly the finest coloured fruit in the show, but the unsightly marks made by netting individual fruits were too much in evidence. Mrs. Blashett, Bridge Soblers, Hereford, took first prize for Apples. Here Peasgood's Nonsuch was superb but for the netting marks mentioned above, and there were rather small, but finely coloured fruits of Adams' Pearmain. The second prize fell to Mr. R. M. Whiting, Credenhill, Hereford. Pears were also well shown. For Pears, Mr. G. Hadfield, Moorarton, Ross (gardener, Mr. John Rick), was first. Mr. Spences, gardener to Mr. H. C. Moffat, Goodrich Court, Ross, took second place, his best fruits being Doyenné du Comice, a superb dish, and Durondeau, a little out of character for this very

distinct kind. The next division included all the Welsh counties except those mentioned above, and only three collections were put up from here, two of Apples and one of Pears. Mr. R. D. Hughes (gardener, Mr. Jones) was placed first, his only good dish being one of Ribston. The second prize lot was very coarse, and was composed either of windfalls or they were wretchedly packed, for almost every fruit was badly bruised. Pears were even worse, and here the judges rightly refused to make an award. It was a disgraceful exhibit, certainly not worthy of Wales. One collection came from the northern counties, Mr. J. Garside, of Ladbroke, being awarded first in the Apple class for a fairly good lot. From Scotland there were but three entries, two for Apples and one for Pears, but the quality was distinctly good. Mr. J. Day, gardener to the Earl of Galloway, Carlisle, N.B., had a nice even collection of clean, well-coloured fruit in the Apple class. Mr. J. McKinnon, gardener to Mr. W. Miller, Roundwood, Crief, took second place. In the collection of Pears that Mr. Day put up for first prize were characteristic examples of Doyenné Boussoch, Marie Louise d'Uccle, Souvenir du Congrès, Gratioli of Jersey, and Mme. Treve.

DIVISION VI.—DESSERT APPLES.

In this division popular and useful kinds were very much to the fore, and we noted with satisfaction that there were, for instance, three dozen dishes of Ribston, thirty-three of Cox's Orange and over twenty of Blenheim Orange Pippins. Not so satisfactory by any means was the judging, and complaints from exhibitors were plentiful and amply justified. In one class—that for Cox's Orange Pippin—a superb dish from Reigate won, and rightly. In that for Blenheims splendidly grown fruit was passed and the prizes awarded to much smaller specimens. Either Blenheim Orange ought to be left out of the dessert class or else the best fruit should win. As it stands, exhibitors do not know what to show—small dessert-sized fruits or fruits characteristic of the variety, viz., large, symmetrical and of good colour, for both were passed over in this case for medium-sized and not too well grown specimens. Of Adams' Pearmain four nice dishes were shown, none of them coming up to last season's form, but still good. The first prize went to Mr. H. H. Williams, of Truro (gardener, Mr. Cornelius), for rather rough but large fruit, the Duchess of Cleveland, Battle Abbey (gardener, Mr. Camm), being second with much better finished, but smaller fruit. Allen's Everlasting is evidently not thought much of. It was poor last year, it was worse this, only one dish from Mr. F. W. Buxton, of Sawbridgeworth, being shown. Allington Pippin is a fine-looking Apple, and here the judges had apparently made up their minds that colour should carry the day, the first prize in a strong competition going to Mr. C. Ross, gardener to Capt. Carstairs, Welford Park, Newbury, Mr. Whiting, of Credenhill, Hereford, being a close second. The same exhibitor just wrested the first prize from Mr. H. H. Hurnard, of Gurney's Manor, Norfolk, for Baumann's Red Reinette. Among the losers in this class was a dish of beautifully finished, fine fruit that showed marks of netting very plainly. As there were a number of prizes withheld, it seemed a pity that the judges did not, if they had the power, give extra prizes in the Blenheim Pippin class, for, as mentioned, there was a very strong competition. The first prize went to Mr. F. M. Lonergan, of Cressingham Park, Reading (gardener, Mr. Chamberlain); second, Mr. A. E. d'Avigdor Goldsmid (gardener, Mr. Earl). Four medium dishes of Brownlee's Russet were staged, Mr. Coleman, gardener to Mr. T. L. Boyd, North Field, Tonbridge, putting up the best dish, Mr. Sage, gardener to the Marquis Camden, being second. Mr. R. M. Whiting, of Hereford, and Mr. F. W. Buxton, Sawbridgeworth (gardener, Mr. Gedden), had first and second places respectively for Claygate Pearmain. Three dishes of Cackle Pippin were shown, Mr. A. F. Carter, Newfields, Billingham, and Mr. Kidley, gardener to Mr. W. A. Sanford, of

Nynehead Court, Somerset, taking the prizes in order given. For Court Pendu Plat, the first prize went to Mr. H. Lintott, gardener to Mr. Walpole Greenwell, of Morden Park, Surrey. Seldom has such a splendid dish of Cox's Orange Pippin been shown as that which Mr. King, gardener at Gattton Park, Reigate, put up in this class and which won first place. Each fruit was a model, superbly finished and of extra size. Mr. Slade, gardener to Lord Poltimore, Poltimore Park, Exeter, was second. Duke of Devonshire was represented by six dishes, Mr. J. Rick, Hereford, and the Marquis of Camden taking first and second out of a poor lot. Mr. Whiting was first and Mr. Spencer second for Egremont Russet. Fearn's Pippin was a good class, twelve dishes, mostly good, being shown. Mr. G. H. Dean (gardener, Mr. Stowers) had a very finely finished dish for first place, and he was followed by Mr. S. W. Cornwallis, Linton Park, Maidstone (gardener, Mr. McKenzie). Gascoigne's Scarlet was asked for in the schedule as "small, lightly-coloured fruits," and this well describes the first prize lot put up by Mr. T. Clinch, Denaway, Key Street, Sittingbourne. A fine dish of Gravenstein from Battle Abbey and a poor one from Mr. J. T. Charlesworth were placed first and second, a very fine, well-finished one from Mr. Maxim, gardener to Col. Walpole, Heckfield Place, Hampshire, being quite overlooked. Two dishes only of James Grieve were shown; the first by Mr. J. Day, of Galloway House Gardens, Galloway, N.B., the second by Mr. A. E. d'Avigdor Goldsmid (gardener, Mr. C. Earl). In the class for King of the Pippins again many cultivators must have been struck with the way the judging was done. The first prize went to Linton Park, Maidstone, the second was won by Mr. Stowers, gardener at Whitehall, Sittingbourne. King of Tomkins County was not largely shown, the best, a very fine dish, coming from Heckfield Place, Hants. Mabbot's Pearmain was not particularly good, the first prize lot coming from Somerhill, Tonbridge. Mr. F. S. W. Cornwallis had the best Mannington Pearmain, fine, well coloured fruit. In the class for American Mother the smaller fruit took first prize, these coming from Mr. Whiting, of Credenhill, Hereford. They looked very good, but were not so well grown as the second prize dish from Surgeon-General Planck. Mr. King, of Gattton Park, Reigate, had a very fine dish of Ribston Pippin. Half-a-dozen dishes of Rosemary Russet were shown, good characteristic fruit from Battle Abbey taking first place. A good dish of Ross Nonpareil won first place for Mr. F. S. W. Cornwallis. Mr. Hudson, gardener to Messrs. Rothschild, Gunnersbury, showed the only dish of Scarlet Nonpareil, and was awarded first prize. Sturmer Pippin was shown by six exhibitors, but all were poor, the first and second prizes going to Welford Park and Reading. Three dishes of Wealthy were shown, Mr. R. Whiting being decidedly first. That the showy Worcester Pearmain retains its popularity was shown by the fact that eighteen dishes, mostly of excellent appearance, were staged, and here again Mr. King, of Gattton Park, was successful, his fruit being very regular and most beautifully coloured. Mr. Duncan, gardener to Mr. C. J. Lucas, Warnham Court, Horsham, ran him hard and obtained a good second. In the class for any other variety, Thomas Andrew Knight, the new seedling Apple, said to be a cross between Peasgood's Nonsuch and Cox's Orange Pippin, won easily; it was shown by Mr. Ross, gardener to Captain Carstairs, who raised it. Mr. Wyther, gardener to the Duke of Northumberland, Syon House, Brentford, was awarded second place for a nice dish of Golden Russet.

COOKING APPLES.

The cooking Apples in single dishes made a good display, some kinds in particular being very fine. With Alfriston, Mr. T. Spencer, gardener to Mr. H. C. Moffat, was first out of seven entries; Mr. J. Allen, gardener to Mr. G. Hanbury Field, second. Mr. Chamberlain, gardener to Mr. F. M. Lonergan, Reading, and Mr. R. Whiting won with Beauty of Kent. There were only three

entries for Belle de Pontoise, Mr. McKenzie easily winning first prize. Messrs. Sweet and Stower took the prizes for Bismarck. Bramley's Seedling brought fifteen entries, some of the dishes being unusually fine, Mr. H. Cook, Sidmouth, Mr. Ross, Welford, and Mr. W. Humphreys securing the prizes offered by the Messrs. Merryweather. Mr. Slade, gardener to Lord Poltimore, took first with Cellini in a class, though numerically strong, yet weak in quality. Cox's Pomona was better, but not equal to some we have seen. Mr. Stowers had the best, and Mr. King, gardener to Mr. J. Coleman, Reigate, was second out of eleven entries. Fifteen competed for Dumelow's Seedling, Messrs. Camm and King winning the prizes. The season was over for Ecklinville, and the fruits not very fine for the sort, Mr. Stowers having the best. Mr. McKenzie staged some fine Emperor Alexander for the first prize, and also Golden Noble, Golden Spire, and Grenadier, the two latter being small entries. The best New Hawthornden came from Mr. Herbert, gardener to Mr. J. F. Charlesworth, Redhill, and Mr. Ross, Welford Park. Lane's Prince Albert made a capital class of eleven entries, Mr. Stowers winning, as he also did with Lord Derby out of nine dishes, Mr. Herrin, gardener to Mr. J. B. Fortescue, Dropmore, following. Neither Lord Grosvenor nor Lord Suffield was good, the date of the show being too late for them. Mère de Ménage brought out six entries, the winning dishes, staged by Messrs. Ross and McKenzie, being exceptionally fine. The best Newton Wonder from the northern counties came from Mr. H. Turner, of Norfolk, and Mr. Divers, Belvoir Castle; and in the southern counties, Mr. Cook, of Sidmouth, and Mr. Potter, gardener to Sir Mark Collett, were the winners. Much the best Peasgood's came from the Kentish growers, Messrs. McKenzie and Stowers, of Maidstone and Sittingbourne, and remarkably fine fruits they were. Mr. McKenzie showed the best Potts' Seedling, and Mr. Ross the best Royal Jubilee. Mr. McKenzie again led with Sandringham, and Mr. Sage, gardener to the Marquis Camden, had the best Spencer's Favourite. Messrs. Whiting, of Hereford, and C. Ross staged the finest out of ten dishes of Stirling Castle. The Linton Park and Welford gardens contributed the best Stone's. The Queen was represented by nine handsome dishes, Mr. Stowers, of Sittingbourne, and Mr. Maxim gaining the prizes. Tower of Glamis, shown by Messrs. Hagon, Liphook, and McKenzie, were very good. Waltham Abbey produced only a small entry, but Warner's King numbered ten dishes of very fine fruits, one dish in particular being brighter coloured than any we have previously seen, Mr. J. Harris, Croydon, and Mr. W. H. Davis, Newent, having the best. A fine dish of Tyler's Kernel won for Mr. J. Dawes, gardener to Mr. Biddulph, Ledbury, the first prize for any other variety, Mr. Ross staging Harvey's Wiltshire Defiance for second.

DESSERT PEARS.

Generally speaking the classes for dessert Pears were well filled, there being but four classes not represented. Mr. J. Friend, gardener to the Hon. P. C. Glyn, Rook's Nest, Godstone, was first for Beurré Bosc. There were only three lots of Beurré d'Anjou, Mr. Chamberlain having the best and Mr. Sage the next best. Of Beurré Diel there were some very fine dishes, Mr. W. Allan, of Gunton, winning with what was generally considered an inferior dish to that staged by Mr. Wythes for second. Mr. Sage was first with Beurré Fouquerey, Mr. Hudson second. Messrs. J. Allen and Stowers had the best out of four good dishes of Beurré Hardy. Beurré Superfin was not numerous, but very good, Mr. A. H. Rickwood, gardener to the Dowager Lady Freake, Twickenham, and Mr. Allan, of Gunton, gaining the awards made. Mr. Herbert, Redhill, showed the best Comte de Lamy, and Mr. W. Allan the next best out of five dishes. Mr. Hudson, Gunnersbury, showed Conference in fine form, as did Mr. Chamberlain and Mr. Ross in the class for Conseiller. Eight competed with Doyenné du Comice, Mr. W. H. Bacon, gardener

to Sir Marcus Samuel, Mote Park, Maidstone, and Mr. W. Harrison, gardener to Col. Archer Houlton, Bishop's Stortford, having the best out of several good dishes. The only dish of Duchesse de Bordeaux came from Mr. E. Coleman, gardener to Mr. T. L. Boyd, Tonbridge. Mr. Bacon won with Durondeau, Mr. Spencer, Goodrich Court, Ross, being second. There were but two lots each of Easter Beurré and Emile d'Heyst, Mr. W. Jones and Mr. W. Allan, of Gunton, winning first prizes. Four competed in the class for Fondante d'Automne, Mr. W. H. Godden, gardener to Mr. F. W. Buxton, and Mr. W. Allen, gardener to Lord Brassey, Normanhurst, Sussex, taking the two prizes offered. Glon Morceau was not well shown, but Josephine de Malines was in very good form, Mr. Jones and Mr. Ross staging the best out of six entries. Mr. Wythes contributed a very bright dish of Louise Bonne of Jersey, as did Mr. Cook, Compton Bassett, Wilts, for second out of eleven entries. Mr. W. H. Godden showed the best dish of Marie Benoist, and Mr. W. Allen and Mr. Moore some fine Marie Louise. Three very handsome dishes of Marguerite Marillat were shown, the best by Mr. F. W. Thomas, Polegate, and Mr. Slade, gardener to Lord Poltimore, Exeter. Mr. Thomas staged the best Nouvelle Fulvie; Mr. Wythes was second. Only two competed with Olivier de Serres, but seventeen staged Pitmastou Duchesse, mostly of large size, Mr. C. Morgan, gardener to Mr. S. J. Du Croz, Oaklawn, Weybridge, and Mr. J. Webb, gardener to Mr. H. Padwick, Manor House, Horsham, gaining the prizes. Seckle, the best of all Pears, was well staged by Messrs. Ross and Sparks. Souvenir du Congrès was enormous and of beautiful colour, Mr. C. Herrin and Mr. Thomas having the best. There were six dishes of Thomson's staged, the best by Mr. Allen and Mr. Hudson. Winter Nelis had also six entries, Messrs. Chamberlain and Webb scoring. There were seventeen lots staged in the any other variety class, Mr. Allen contributing fine Williams' Bon Chrétien, and Mr. Stowers Duchesse d'Angoulême almost equally good.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 10, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. At 3 o'clock a lecture on "The Injurious Scale Insects of the British Isles" will be given by Mr. R. Newstead, F.S.

National Dahlia Society.—At the exhibition held on September 19 at the Royal Aquarium, Westminster, first-class certificates were awarded to the following new varieties: *George Hobbs* (Show), a dark, well-formed flower; colour crimson-maroon. From Mr. T. Hobbs. *Empress* (Fancy), ground colour purplish rose, striped with purplish crimson. From Mr. St. Pierre G. Harris. *Mme. Medora Henson* (Cactus), good form, very narrow petals, centre too heavy; crimson, shaded purple. From Mr. T. S. Ware. *Maurice S. Walsh* (Cactus), a good pale yellow variety. From Mr. J. Stredwick. *Mrs. Carter Page* (Cactus), a large flower, long petals, good form, crimson-scarlet. From Mr. J. T. West and Messrs. Keynes, Williams and Co. *Sylph* (Cactus), very fine orange-coloured variety of medium size, with incurved petals. From Messrs. J. Burrell and Co. *Nara* (Pompon), neat yellow flower, of medium size. From Mr. Chas. Turner. *Hilda* (Single), fancy variety; white, flushed with pale flesh colour and bordered with yellow, very beautiful. From Miss Girdlestone. *Claribel* (Single), pale yellow, tipped with rose. From Mr. E. Mawley. *Eddie Obelin* (Single), golden salmon colour, very pretty and well-formed flower. From Mr. F. W. Seale.

The weather in West Herts.—With one exception the days and nights were all cold during the past week. On the night preceding the 28th ult. the thermometer exposed on the lawn indicated 3° of frost, and on the following night 5° of frost. Both at 1 foot and 2 feet deep the ground

is now about 2° colder than is seasonable. Rain fell on every day during the week, and to the total depth of nearly 2½ inches. On the 1st the fall was a very heavy one, amounting to 1½ inches, making this the wettest day here since July 18, 1895. The heaviest downpour took place between 3 p.m. and 4 p.m., when at one time the rate of fall for three minutes amounted to 2 inches an hour. The second of the above-mentioned frosts blackened the upper half of my Dahlias and ruined their prospects of flowering for the rest of the season. September proved warm, and especially was this the case at the beginning of the month. Rain fell on nineteen days to the aggregate depth of 2½ inches, which is half an inch below the September average. Nearly half of the above total fell during the last two days of the month. With the exception of the same month in 1895 and 1898, this was the most sunny of the last fourteen Septembers. With September ended the summer half of the rainfall year, and during these six months 12 inches of rain fell, or 2 inches short of the average for the same period in the last forty-three years.—E. M., Berkhamsted.

OBITUARY.

DR. ALEXANDER WALLACE.

DR. ALEXANDER WALLACE, M.A. Oxon., M.D., and M.R.C.P., who had distinguished himself in the study of botany and entomology, died on Sunday, Oct. 1, at his residence in St. John's Terrace, Colchester, aged seventy. He received his professional training at St. Bartholomew's Hospital and at Oxford, when he took the M.B. and A.M. degree in 1858, having been elected a member of the Royal College of Physicians, London, the preceding year, and in 1861 proceeded to the M.D. degree. He was for a time physician to the Metropolitan Free Hospital and the St. Pancras and Northern Dispensary, and he was a member of the Entomological Society of London, acting physician to the Essex and Colchester Hospital, and a member of some of the learned societies. In addition to many contributions on professional subjects to the St. Bartholomew Hospital Reports and to the professional journals, Dr. Wallace was author of "Notes on Lilies and their Culture," which had passed through two editions; "Ailanthiculture, or the Prospect of a New English Industry," and of "On the Oak-feeding Silkworm from Japan," prize essays of the Entomological Society of London in 1865-6.—*Times*.

Death of Mr. Jas. Martin.—We regret to announce the sudden death, early on Wednesday morning, of Mr. Jas. Martin, the well-known hybridist, who was for over forty years the faithful servant of Messrs. Sutton and Sons, of Reading. His death was entirely unexpected, he having retired to rest in his usual health on Tuesday night.

Fruit "appropriation."—At the recent fruit show at the Crystal Palace some work in this line was done. The writer was a loser in more than one instance of selected fruit. It is, of course, impossible for an exhibitor to remove all his single dishes at once; meanwhile someone else does so without his consent. A few detectives would have been of service on the last occasion along the outside tables, where the fruit could readily be removed back out of sight in a short time.—A LOSER.

Names of fruit.—Webb and Brand.—Fearn's Pippin.—Anon.—1, Ribston; 2, Winter Hawthornden; 3, Cox's Orange Pippin; 4, Ribston; 5 and 6, Blenheim. We cannot name more than six varieties in any one week.—J. R. P.—1, Apple looks like small Blenheim.

Names of plants.—J. R. P.—2, Geranium; send better specimen with fresh flowers; 3, *Spiraea prunifolia*; 4, *Spiraea japonica alba*; 5, *Adiantum cinnabarinum latum*.—W. W. Fleming.—1, *Colchicum speciosum*; 2, *C. Szovitzianum*.

THE GARDEN.

No. 1456.—VOL. LVI.]

[OCTOBER 14, 1899.

INDEX.

(Illustrations in Italics.)

Chrysanthemums:—

Chrysanthemum Emily Silsbury	291
Chrysanthemum Francois Vuillermet	292
Chrysanthemum growing round Norwich	291
Chrysanthemum Harvest Home	292
Chrysanthemum Mme. Liger Ligneau	291
Chrysanthemum Mme. Carnot	292
Chrysanthemum Mrs. A. Hall	292
Chrysanthemum Mychett White	292
Chrysanthemum Queen of the Earlies	292
Chrysanthemums, seedling, Australian	291

Books:—

"Murray's Handbook to Wilts and Dorset" ..	293
"The Birds of Berwickshire" ..	292

Kitchen:—

Brussels Sprouts	293
Cardoon blanc d'Ivoire	293
Cucumbers, market	293
Onions, autumn	293
Peas for market	293
Potatoes, lifting	293
Potatoes, Eclipse	293
Turnips, long-rooted	293

Notes of the Week:—

Aster N.B. Robert Parker nanus	294
Casalpinia Gilliesi	294
Caryopteris mastacanthus	294
Chrysanthemum Jules Mary	294
Chrysanthemum Mrs. Burrell	294
Colchicum autumnale album plenum	294
Gentiana asclepiadea	294
Pansy, Tufted, Florizel	294
Phlox coccinea	294
Plumbago Larpetæ	294
Tacsonia Van Volckem fruiting	294

Tropæolum speciosum in Oxfordshire	294
Tropæolum tuberosum	294

Fruit and Vegetable

Crops 296

Flower:—

Anemone alpina	299
Bulbs, Californian, for forcing	299
Dahlia, Cactus, Eileen Palisser	300
Dahlia, Cactus, Magnificent	299
Dahlia, selecting Cactus	300
Devon, September climbers in	300
Dianthus Heddegi for button-holes	300
Eucemis punctata in the open	299
Helianthemum amabile fl. pl.	295
Heliotropes in the flower garden	300
Hemerocallis aurantiaca major	299

Linnocharis Humboldtii not flowering	300
Lobelia Carmine Gem	300
Nymphæas tender in the open air	299
Sultans, Sweet, for market	299
Water Lilies in Ireland, M. Latour-Mariac's	298

Garden Flora:—

Prunus pseudo-Cerasus (single var.)	300
---	-----

Week's Work:—

Fruits under glass	291
Kitchen garden, work in the	292

Orchard and Fruit:—

Apple Beauty of Bath	306
Apple King of the Pippins	303
Apple Tyler's Kernel	302
Peach Princess of Wales	306
Pears adopted by the Congrès Pomologique of France	303
Strawberry plants, young	303
Strawberries, late	302

Stove and Greenhouse:—

Azalea Mrs. Turner	306
Azaleas	306
Schubertia grandiflora	307

Societies:—

National Chrysanthemum ..	309
Royal Horticultural	307
United Hort. and Benefit Provident	310

Obituary:—

Wood, John	310
--------------------	-----

Miscellaneous:—

Chrysanthemums in the parks	310
Horse Chestnut, pruning the	310
Lapageria rosea and L. alba	310
Lawn with trees in natural form (Cassiohury)	295
Terrace garden with trees in true form (Sandside, Thurso, N.B.)	301
Trees, forest, wilful disfigurement of	295
Yew, clipped arches of	304
Yew hedges, old, at Holme Lacy	297

CHRYSANTHEMUMS.

AUSTRALIAN SEEDLINGS.

ONE of the chief aids to keeping a certain class of flower popular is the introduction of novelties. In regard to Chrysanthemums this has certainly been the case, and one who has watched each changing phase cannot record anything which appears more remarkable than the rapid rise of varieties sent from Australia. The raisers there seem to know the requirements of cultivators here, and many of those varieties have such merits as to leave little to be desired. The majority, perhaps, incline to the form of incurving Japanese, but for handsome appearance, bright shades of colour, and sturdy habit with healthy leafage they are among the best. The first lot sent over included *Pride of Madford*, *Australie*, and *Oceana*, now well known as splendid exhibition sorts. The lasting powers of the last-named, too, are most marked. Master H. Tucker, a dark crimson bloom fine in every way, followed with a sort called *Beauty of Adelaide*. This has not succeeded. Then came a host of new kinds, some of which are now in pretty general cultivation; others are not. *Nelly Pockett*, creamy white, is a lovely flower. Not extra large, but big enough, it gives a gracefully-formed bloom from every bud, and is as pretty as a bush as when severely disbudded for show. A short grower that keeps the foliage well, it is excellent for small pots from late-struck cuttings. Another white more pure in colour but less good for large blooms is *Mrs. C. Bown*. This variety makes a splendid bush plant. It blooms somewhat late; therefore valuable on that account, and for the supply of cut flowers it is first-rate. John Pockett, a rich, very dark shade of terra-cotta and gold reverse, is a noble variety. This has fine foliage, and is equally choice either for exhibition blooms or for the growth of a quantity on a plant. *Fair Maid of Adelaide* is a white-flowered variety of exceptionally dwarf and free habit. *Euterpe* produces blooms of a pleasing rose-pink shade, and I look upon it as a promising variety. So, too, is *J. R. Upton*, which has a very sturdy habit, the yellow blooms reminding one of those of Australian

Gold, but richer in colour. *Mabel Kerslake* and *Pride of Stokell*, which are one and the same, came through a sporting branch of *Pride of Madford*. The blooms, instead of being of a purple shade, as in the type, are bright crimson with gold reverse; the back shade of florets of the parent is lilac. Curiously, the growth of the new variety is less strong. In Chrysanthemums obtained from sports the growth is always similar. The above instance points to the contrary, and this is not an isolated one. Observation convinces me that the colours of the blooms have a considerable effect upon the comparative strength of growth. *Miss Mary Underhay*, yellow, is not unlike *Oceana*. Its habit, however, is tall, and the blooms lack the great substance of those of the variety named. *Miss Vera May Fraser* is an excellent sort, the flowers of an amber-yellow shade, of large size and shapely form, the florets drooping with just a curl at their tips. It is dwarf in growth. The *Convention* is another sort with amber-tinted blooms, a colour so much esteemed. The flowers are of rare substance; it is dwarf and most promising. *Mr. T. Carrington* is thought by some to be too much like *Australie*, but as the last grows to a height of 9 feet and the new kind less than 5 feet, it is an improvement. To my thinking, it gives better flowers as well. The habit of the variety *Mrs. Ernest Carter* is excellent, and its light yellow flowers well formed and lasting. Taking into account the number of white sorts we have, *Mrs. H. B. Higgins* may not be required. It bears gigantic flowers, however, and will be valued for exhibition. *Purple Emperor*, as its name suggests, gives blooms of a decided purple hue. There is nothing in Chrysanthemums like it. The flowers are of medium size and the plant of medium height. *Tucker's Perfection* is rather a tall grower. This will probably be discarded on that account. *Chatsworth*, a first-rate kind, white, with rosy stripes, is distinct, the shape of the blooms exceedingly graceful and the growth satisfactory. *Lord Ludlow* is noted for the depth of its blooms. The colour, golden amber, and its good habit of growth make it a sort of considerable merit. *Walleroo*, of a purple shade, is likely to be a good exhibition sort. *G. H. Kerslake*, pearly white, bears fine flowers;

the habit dwarf and branching. This, with *Mrs. Bissett*, *Wonderful*, and one or two others, are on trial for the first time this season.

There are later consignments of Australian seedlings in this country which should be watched with interest, as I look in the direction named as an important source in the way of further improvement in respect to Chrysanthemums. H. S.

Chrysanthemum Emily Silsbury.—No variety under glass equals this in beauty at the present time. It is one of the few really early sorts which produce their terminal buds in September. The spare growth and small foliage look as though they cannot perfect such large handsome blooms as are obtained. But it is a sort that should be grown in quantity. The flowers are white, with petals of a thick leathery texture. They recurve one above the other in a dense mass. Even if not freely disbudded the blooms come perfectly double. This, with stiff wiry stems to each bloom, makes it a valuable kind to grow for cutting. In the race for novelty exceptionally good varieties often get put aside. I think this is one, and would recommend its more general cultivation.—S.

Chrysanthemum growing round Norwich.—The number of acres devoted to the culture of Chrysanthemums in the neighbourhood of Norwich is astonishing. One would scarcely think it possible all the bloom could be disposed of. In one nursery I visited recently there were, I suppose, at least 50,000 plants growing in the open, and I was quite surprised to find the plants in such robust health and so full of bloom after the great drought. The two shades—yellow and white—of *Mme. Desgrange* occupied several acres and were in full beauty. They are at their best fully early, however, and the fact that other summer and autumn flowers—Asters, for instance—are yet in good condition and plentiful renders the sale of Chrysanthemums extremely slow. These will all be cut and conveyed to market before frost cuts them down, but the thousands of later varieties will be lifted and planted closely in a rough-and-ready manner in Cucumber and Tomato houses.—C.

NOTES AND QUESTIONS.

Chrysanthemum Mme. Liger Ligneau.—This is an excellent cut to the early-flowering

kinds. It blossoms very well in the open, but I fancy it will be more valuable as a pot plant, because of its being somewhat tender. The habit is especially dwarf and bushy; colour of the blooms a clear shade of yellow.—H.

Chrysanthemum Francoie Vuillermet.—This useful early-flowering sort is very little known, and yet it may be classed as an ideal plant for the open border. The habit of the plant is dwarf and branching, rarely exceeding 2 feet in height, and under ordinary treatment developing an immense number of rather small rosy lilac blooms. This is now in fine form.—D. B. C.

Chrysanthemum Queen of the Earlies.—This early-flowering Chrysanthemum deserves extended cultivation. We have somehow got into the way of confining the selection of early white sorts to such well-known kinds as Mme. C. Desgrange and Lady Fitzwygram, while the superiority of the variety under notice is most marked. The flowers are large, with long and fairly broad florets of good substance. The habit is fairly dwarf and the constitution robust, while it also flowers freely.—C.

Chrysanthemum Mme. Carnot.—Complaints reach me again this year that this variety, also its sports G. J. Warren and Mrs. W. Mease, are troublesome in the matter of the buds—that is, they swell to about the size of Peas and then turn black and perish. The cause is difficult to determine. It seems to me wise to give these kinds little feeding. The flower-stalks are gross, and it would be well to stand the plants in a shady place to get the buds over the stage when they are likely to be affected.—H. S.

Chrysanthemum Harvest Home.—When this sort was introduced a few years since it was hailed with delight by those interested in possessing a range of colour in the early-flowering varieties. Its reddish crimson colour, although tipped golden yellow, makes it a distinct flower in the early section. Unfortunately, it is rather spare in its growth. At the trial of early sorts in the Chiswick Gardens this variety received the distinction of ***. For the past fortnight the plants have been flowering freely, and promise to do so for some time. Market growers are now taking up this sort.—C. A. H.

Chrysanthemum Mrs. A. H. Hall.—This flower is now in splendid condition, and has caused some surprise because of its being a seedling from the well-known Japanese Edith Tabor. A batch of plants, which were topped in the middle of April and second crown buds retained, is just now at its best, the height not more than 3 feet at the most. The earliest blossoms are almost yellow in the centre, passing off to a bronzy crimson at the ends of the petals. The florets are broad, slightly curled and twisted, and of good substance. Later flowers promise to be of a much richer colour.—C. A. H.

Chrysanthemum Mychett White.—It is gratifying to find this chaste flower is coming very nicely this season. This is more noticeable where the stock has been carefully nursed and stimulants to a great extent avoided. As a white Chrysanthemum for outdoor culture it is one of the best, the more natural conditions of growth evidently suiting the plant admirably. In the first and second seasons of its introduction the stock plants were worked far too hard, and as a consequence the constitution was impaired. A recent visit to Ryecroft Nursery served to illustrate the usefulness of this sort in the open border, while indoor plants in 5-inch pots were each carrying a lot of pretty little blossoms.—C. A. H.

—The above variety is first-rate as regards flowers, but the habit of growth is not so satisfactory. It is not easy to propagate, the plants during the winter being very tender and the cuttings few. Then it has a way of sending out one strong shoot instead of many; consequently it is not easy to obtain a bushy plant. This tells seriously against it as an outdoor kind. I think the sort should be cultivated in pots, and these small ones. It flowers most profusely on the few growths that are made, and under glass the blooms are first-rate, but as an outdoor white it will never surpass such well-tried favourites as Mme. C. Desgrange and Lady Fitzwygram.—H.

Leaf-down a cause of hay fever and cold.—Some persons, notably those subject to hay fever, are well aware that they have only to betake themselves in the evening to the shelter of trees to immediately contract a sore throat or a

cold in the head. Many people are unable in the evenings to sit under trees without catching cold, and sometimes fever. The evening air, it has been said, is fatal to people of a certain temperament. To put it more plainly, the atmosphere after sunset is laden with moisture, and is the vehicle of certain organic matters which irritate the respiratory passages. Many people are not influenced by this state of the atmosphere; others, on the contrary, are very susceptible to it. A Mr. Hilliger, a German residing at Barcelona, lately took note of these effects in so far as they concerned himself. For some years, at the commencement of spring he and his family suffered from an epidemic of coughs without being able to define the cause. On his placing some of the expectorated matter under the microscope, it revealed to him certain strange star-shaped bodies, which he found also present in the dust on his window. He noticed the similarity between these bodies and the fine down which covers the young leaves of the Plane tree. This dust, then, was the cause of the inflammation of the bronchial tubes of the Hilliger family. The discovery of Mr. Hilliger has very ancient authority in support of it, as the same had been noted by Dioscorides and Gallien. Those eminent persons laid it down in the most formal manner that the down of the Plane leaf engenders hoarseness and cough and is even dangerous to the eyes and ears. What is true about the Plane is true of other species. It is well to know it, as it offers a very simple explanation of some mysterious maladies.—*La Semaine Horticole.*

BOOKS.

THE BIRDS OF BERWICKSHIRE.*

THIS is one of the best books of the kind we have seen. It is full of charming illustrations, and the paper, printing and binding are excellent. There are several full-page etchings by W. B. Hole, R.S.A., W. D. McKay, R.S.A., and Mr. John Blair, as well as numerous fine vignettes by the last-named artist, whilst beautiful pen-and-ink drawings of the nests of many of the birds, taken from Nature by the late Mrs. Muirhead, are given as tail-pieces to the chapters.

In the introduction to his valuable work the author describes the natural features of Berwickshire, with the Lammermuir Hills on the north, its bold, precipitous coast, its fertile, undulating, wooded plain known as the Merse. It must be a true paradise of the bird lover, with its well-wooded slopes and its wild and rocky coast. In the olden days the Merse, now a fertile and well-drained plain, contained many shallow lochs and impenetrable bogs, the haunt of aquatic birds, from the teal to the wild swan, where "the hollow boom of the bittern, or 'bull of the bog,' was heard resounding through the marshes, mingled with the weird cries of innumerable water-fowl of various kinds." Birds of prey abounded.

The white-tailed eagle soared in the sky, the peregrine, the merlin, and the sparrow-hawk swept the hills and the plains, whilst the buzzard and the hen-harrier hunted the fields and marshes. The hoarse cry of the raven was ever present, and the chattering of the magpie and the jay was constantly heard in the wooded valleys.

Since the commencement of the last century the improvements in the management of the land, the planting and draining that have been going on under energetic proprietors and industrious tenants have caused many of these birds to forsake their ancient haunts. Where the bird of prey formerly abounded is now the

"The Birds of Berwickshire." By Geo. Muirhead, F.R.S.E., &c. In two vols. Edinburgh: David Douglas.

haunt of the blackbird and the mavis, the wood pigeon and the stock dove. In autumn and spring immense flocks of wild geese still revisit their favourite resorts in the higher ground, and the

wild whistling notes of the curlew and the golden plover, as well as the screams of the lapwing, are heard in the summer all over the moors, for here they have their nests and rear their young. The snipe frequents the bogs, where it drums in spring and has its home among the Rushes. At the same season the song of the ring ouzel cheers the weary shepherd, whilst the wheatear and the whinchat flit chirping from stone to stone. The skylark rises from the dewy grass to salute the morn, the timid titling peeps in the Heather, and in the neighbouring vale the voice of the wandering cuckoo falls upon the ear. When the hill-sides are glowing with the golden bloom of the Whin, the linnet builds her bower in the prickly fortress, the twite nestles in the Heath, and the fragrant Larches, here and there fringing the sides of the rocky streams, afford shelter to the willow wren, which gladdens the solitary angler with its song.

On the bold and precipitous coast

the rock dove rears its young in safety amid the spray of waves which never rest. On yonder point, where the shelving reefs are being rapidly covered by the advancing tide, we see a small group of herons patiently waiting for their finny prey, and on a dark crag a little further from the beach the swarthy cormorant sits in undisturbed repose. Flocks of mallard float in security on the surface of the heaving waters, the golden eye dives at intervals beneath the surf, whilst the eider displays its parti coloured plumage to his sober-suited mate.

The above quotations are taken from the author's introduction. Each bird of Berwickshire has a chapter devoted to its history and its appearance and habits. The book is in two volumes, the first containing the smaller birds and the second the larger, birds of prey and game birds. We cannot speak too highly of the way Mr. Muirhead has performed his task. It must have been a labour of love indeed to have carried it out so well and spared no expense or pains to make each chapter full of interest as well as information, and every single vignette an artistic achievement of its kind. These handsome white volumes will be a delightful addition to the library of the sportsman as well as the mere Nature lover.

Botanical books, as we see in "Proserpina," have often very hard words, even for the scholar, but bird men, to give them an English name, seem to have even less heart than the botanist, as we may see opening such a book as Backhouse's list of birds, which begins with a mechanico-technical description of a rarity like the robin. What can be thought of a critic who objected to any further information being given about the birds of Berwickshire than the length of their tails and the like? In writing the accounts of the birds in this book Mr. Muirhead has tried to give them as much human and local interest as possible, so as to make his remarks readable by people who are not dry-as-dust ornithologists. If we wish to see what these men think or know about birds, read their writings in some of the leading ornithological periodicals. Their whole ideas of these most lovely and interesting creatures are that the "tarsi are $2\frac{1}{16}$ of an inch long and the fourth toe $\frac{1}{16}$ ths of an inch long." Their descriptions are so tiresome, that they are quite unreadable to the human being whose first thought of a thrush is not the length of some of its lesser parts. It is a shallow pretence of science these trivial measurements of certain parts, as many

other questions about even our common birds would interest all, such as the habits of life, migration, distribution, relationship, variation, nests, and nesting-places. But we are treated in just the same way by the botanists, and even some of the foresters choke us off with the dry and small bones of the subject.

The late Mrs. Muirhead was the constant companion of her husband in his study of the birds of their county and made many drawings from Nature, taking the greatest pains to draw and study all the surroundings of each nest. The result is a very artistic and precious book in every way.

Murray's "Handbook to Wilts and Dorset."—A carefully-revised edition of this has just made its appearance. Wilts and Dorset, two of the most naturally favoured of English counties, have an added interest in being the theatre of most, if not all, of Thomas Hardy's romances. There is a revised account of Salisbury and Stonehenge, of which much has been heard of late, and the maps and plans are unusually numerous. Mr. Murray's guides are too well known to need fresh commendation. We suppose no intending tourist ever contemplates any other. The maps are very clear and good, and the book in all ways worthy of the counties it describes.

KITCHEN GARDEN.

LONG-ROOTED TURNIPS.

LONG-ROOTED Turnips are valuable, more especially in dry seasons. Any vegetable that roots deeply has a better chance, as it obtains more moisture. In continental countries the long-rooted Turnips are greater favourites than with us. I noticed in the Paris markets very few of the round roots, but great quantities of the long-rooted varieties. The flavour, too, was excellent. This is a strong point, as Turnips, or their substitute, Kohl Rabi, are used daily. I must admit they are cooked well and are a valuable addition to the meat courses, as they are placed round the dish, cut into different shapes, and are more relished than if served mashed or boiled as in this country. The Jersey Navet, or French Forcing, as it is more commonly called in this country, is an oblong root, and is certainly one of the best forcing roots I have grown. It will often be found that a root that forces well is good in dry weather. The Jersey Navet is noted for its good drought-resisting qualities, and is of very good flavour. This is a favourite in the market for earliest supplies, as it turns in quickly in the spring. It may be said that it is not necessary to grow more than one or two kinds of the long-rooted varieties. I certainly advise growing at least three of them in addition to the Jersey or French Forcing. Another very fine-flavoured Turnip, Marteau à collet rouge, is noted for its superior quality, and is largely grown for summer and autumn supplies for the Paris markets. The root is coloured a portion of the way down and is less tapering than the Jersey variety, with a thick end. A variety called De Freneuse is not so good as regards shape of root, but it has a longer tap root and will stand more drought than the more shapely roots. Navet à forcer demi-long blanc is doubtless a type of the Jersey Navet, and one will suffice. An excellent white variety, Long blanc à collet vert, only differs from the red in colour. A popular variety in Paris is Navet long des vertus Marteau, a name which I fear would not be popular in this country on account of its length. This variety is small at the top and thick at the bottom, almost inclined to be oval, with a long tap-root. There are others less known, but the

kinds named appear to be the most popular, and are certainly worth notice in this country. As of late years we have had hot, dry seasons, it is worth a little extra trouble to obtain those kinds that are more reliable. My note refers to those I have grown. The roots noted above are equally good for winter, as they keep well when stored. I have kept them in the open, but to do this I would advise sowing early in August in cold soils. G. WYTHES.

Cardoon Blanc d'Ivoire.—I recently saw a very superior form of Cardoon to that which we grow in this country. The variety I refer to is much grown for the Paris market under the name of Blanc d'Ivoire, and is a dwarfier variety than the Large Spanish and the De Tours varieties. The variety in question is a good garden Cardoon on account of its solid stalks and peculiar build. The stalks, too, are of a much purer white. In this country we have a poor choice of Cardoons. This vegetable needs careful selection, as it soon deteriorates if left to chance. No matter what kind is grown the best culture must be given to get good stalks, and lack of moisture in dry weather is fatal to succulent growth.—G. WYTHES.

Lifting Potatoes.—Lifting Potatoes that have grown to their full size is frequently postponed, especially if the weather holds dry; consequently many are caught napping, a wet time occurs, and second growth follows or disease is set going, which develops after the tubers are lifted and stored. In East Anglia early lifting is, as a rule, punctually attended to, even if gardeners have to abandon the routine work for a time, as in that part autumn rains, when once they set in, are often heavy and continuous. My contention is that disease may exist in its embryo state and yet not develop to any appreciable degree unless encouraged by some excessive change either in the condition of the soil or atmosphere.—B. N.

Tomato Eclipse.—On visiting a market grower's establishment last week I found that one favourite Tomato was Eclipse. I had not heard of it before, but was assured that for freedom of cropping, shapely fruit, good colour and general quality it was very hard to beat. I think it has been grown there for some years, so it cannot be a new sort. The other sorts grown are Up-to-date and the old Hathaway's Excelsior. The latter, the grower informed me, always secured a ready sale on account of its medium size and shapely appearance. In another grower's houses I found Up-to-date and Challenger, both heavily cropped, with fine, medium-sized, shapely fruit, Ham Green and other varieties having been abandoned. This last grower until recently grew the useful, though perhaps a little small in size, Trentham Fillbasket, which for flavour is still hard to beat.—N.

Brussels Sprouts.—Such an important winter green crop as this is worthy of the best of care from first to last, and the plants should never be allowed to suffer from want of room. The earliest plants for gathering from in September are usually raised under glass, but here I make my earliest sowings outside in March, drawing flat, shallow drills and covering with finely prepared soil. These are drawn and pricked out as soon as large enough, and as early as possible they are put out in rows 3 feet apart and 30 inches apart in the rows. The consequence of this ample room even for the dwarfier kinds is that the plant from first to last is sturdy, and sprout-production begins just above the soil. The quarters for this crop can hardly be too rich, provided the soil is firm, a piece of ground dug and well manured the previous autumn being the best preparation for it.

Autumn Onions.—The autumn-sown Onions are looking very well and are now forward enough to be thinned considerably. It is not a good plan to sow very thinly where there is likely to be a large demand for plants, as in some seasons the seeds are not so good as in others, and birds are very fond of picking them out just as they are

coming through the soil. They should be thinned early so that those left have the advantage of plenty of light and air, which hardens them and makes them more likely to stand the winter. Some gardeners still pull their spring salading Onions from the same rows as their plants for spring, but this is not by any means good practice, for in the first place the rows have to be left much thicker than is desirable and the varieties sown for spring transplanting are not usually the best for salads. The small silver-skinned kinds are the best for salad, The Queen, for instance, being an excellent one. This may be sown several times during the year, and any that are not required for salad are sure to be useful in the kitchen. I have usually found the White Spanish and similar kinds run worse in spring than the Tripoli and Giant Rocca types.—C. H.

PEAS FOR MARKET.

Will you give me the names of two early Peas suitable for market, to be grown without sticks, also the names of two others that would come in say middle of July to the end of September; these will be grown with sticks?—JOHN CLOUGH.

* * Among market growers Eclipse is the most popular early variety for field culture, and large quantities of it are grown. It is hardy, reliable, and early. Ameer, a newer variety, forms a close succession, and when better known will also be largely sown. The seed, being blue round, may also be sown early, or as early in February as the state of the ground permits; whereas if wrinkled seed is sown thus early it is liable to decay wholesale. The haulm under favourable circumstances attains a length of 3 feet, and produces a heavy crop of large, deep green pods, well filled with extra fine peas. Salesmen have no difficulty in getting top prices for good samples of Ameer. No doubt extra heavy cropping is a strong point in favour of midseason and late Peas, but it is possible to attach too much importance to this. Much the best prices are realised for Peas which present the most attractive appearance, both as regards the size of pods—if well filled—and the colour. If the pods are long, thin, and closely packed with peas the buyers get the best of the bargain, as this class of vegetables is usually sold wholesale by measure—not weight. In Hallamshire Hero "J. C." will find a perfect market Pea, and one of the best to gather in July. It is of medium height, a heavy cropper, the pods being of good size, dark green in colour, and well filled. For August I know of no variety to surpass Autocrat. This variety possesses a good constitution, resisting mildew surprisingly well; crops heavily, the pods being moderately large, deep green in colour, and well filled, while the quality is excellent. All the above succeed well without stakes.—W. I.

Market Cucumbers.—Many of the fine exhibition Cucumbers are ignored by growers whose chief consideration is pounds, shillings, and pence. Private gardeners also who dispose of their surplus produce should acquaint themselves with the most profitable constant cropping varieties. Strange to say, most of the latter section are comparatively short, though of fine shape and good deep colour. A Cucumber of medium length always sells best, as many do not care to bring a fruit on to the table a second time after being cut. For a number of years Telegraph was the foremost market Cucumber, and some grow it now, although its somewhat pale colour is against it, and it often develops an objectionably long neck. A variety named the Rochford is very extensively grown, especially near the metropolis, and it certainly is a prodigious cropper, and over a long season, too. I have seen healthy, fruitful plants growing in wonderfully small mounds of soil, plenty of root moisture and a non-arid atmosphere being supplied. Cardiff Castle is gradually gaining popularity as a market Cucumber, and is grown by some for winter supplies, its free-bearing, hardy character at the latter season increasing its value. Lockie's Perfection is an-

other grand Cucumber for profit, as, besides being very free, its fine shape and general appearance soon take the eye. Verdant Green, a variety raised by Mr. McIndoe at Hutton, is rather shorter than Lockie's perhaps, but the darkest in colour of any I know. It scarcely ever develops any neck, being even throughout.—B. S. N.

NOTES OF THE WEEK.

Chrysanthemum Jules Mary.—Among early or semi-early sorts this is one of considerable promise, the flowers of a good shade of rich crimson. The variety would also appear somewhat more hardy than some, for not a few of the darker sorts have felt the recent frosts keenly, while this has escaped. It is also very dwarf in habit.

Chrysanthemum Mrs. Burrell.—This is the pretty sulphur-yellow kind belonging to the Mme. Desgrange section, but it has never had a popularity like the old kind, for the colour at night is too much that of a dirty white, and, indeed, cannot be distinguished from such. In the open it is less effective than the ordinary yellow form, so much so that the variety in a year or two may be forgotten.

Colchicum autumnale album pl.—This is one of those ever-prized hardy bulbous things that promises to be a long time before it is plentiful owing to its slow rate of increase. As an early autumn flower it has a value of its own, and good clusters of it are among the finest things to be seen in border, rock garden, or grass at this season. Its leafless character especially fits it for grass planting, though it may prove to be less speedy of increase here than in good border soil.

Aster N.-B. Robert Parker nanus.—Certainly any Michaelmas Daisy with half a dozen names to its credit is not lacking description when applied as above, but a new name might be chosen for it. The variety is so good, so dwarf and free, and so generally useful, that there is room for it. The pale or light blue flowers are large and plentifully produced, and the whole plant is less than 18 inches high. For borders or for groups this will prove a most welcome kind.

Caryopteris mastacanthus.—This pretty flowering shrub, which has been recently referred to in THE GARDEN, is at Kew employed in No. 4 greenhouse, where a group of plants is profusely laden with the pretty lavender-blue flowers. These blossoms are disposed in whorls on the upper parts of the shoots, the long protruding stamens, of a somewhat deeper tint than the rest of the flower, being very noticeable. This Caryopteris is well worthy of increased attention for flowering under glass, as it supplies a tint quite distinct from the *Salvias*, *Cannas*, *Chrysanthemums*, *Bouvardias*, &c., which are at this time in bloom.—H. P.

Gentiana asclepiadea.—At p. 287 this plant is the subject of an appreciative note which all hardy plant admirers will admit it well deserves. I quite agree with what is there said of its moisture-loving propensity, but I am not at one with the writer in suggesting it as a good plant for shrubby borders, which are of such a variable quantity that knowledge of any particular border is requisite before recommending plants for it. That this Gentian may be established in the wild garden and well grown in the usual hardy plant border is quite true, but in the shrubby border little moisture, to say nothing of other things, exists for so graceful a flowering plant as this.—J.

Tacsonia Van Volxemi fruiting.—I shall be much obliged if you can inform me whether the fruit of *Tacsonia Van Volxemi* is edible. An old plant occupying a border in a house where the temperature at times falls to 48° F. is still flowering profusely, and has perfected fruit. The fruits are at present of a pale green, 3 inches to 4 inches long and 1 inch to 1½ inches in diameter. On a sunny border in the open *Mirabilis jalapa* has been smothered with its richly scented flowers and has also ripened quantities of seed.—H. COMER RENSCHAW, *Stretford*.

* * We have never heard of the fruit of the variety you mention being eaten.—ED.

Tufted Pansy Florizel.—This is proving one of the most satisfactory of the Tufted Pansies

that I have tried here. On light, dry soil, such as that here, comparatively few of these plants will give a long continuance of bloom. Florizel is proving one of the most valuable in this respect, and even now (October 9) old plants are flowering. There are some of more tufted habit at this season, but one can forgive any defect for the sake of its free-flowering all through the season and for its fine blooms. I see these are called "rosy blush," but one fears this is hardly near enough the colour to please those who are particular about colour descriptions. It is easier, however, to criticise than to offer an alternative. Florizel is one of the best of Dr. Stuart's rayless Tufted Pansies.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Tropæolum speciosum in Oxfordshire.—I think that perhaps those of your readers who are interested in the difficulty of inducing the *Tropæolum speciosum* to grow in England may care to hear how I have succeeded in Oxfordshire with it. For many years I have planted it with every care and in every possible situation and aspect, but in vain. Two years ago I was told by a friend to put the roots in autumn into pans or pots filled with ordinary mould with sand mixed, to place the pots in an absolutely dark cellar, where no light can penetrate, to leave them there unwatered till end of March, then plant them against a wall or hedge looking north, and where the long shoots can climb over into the sunny south side of said wall or hedge. All those I have so treated have done splendidly. In winter I cover the roots lightly with Bracken. *Tropæolum tuberosum* also succeeds well under the same treatment.—MARY HERMIONE DAWKINS, *Wilcote, Charlbury*.

Phlox coccinea.—It seems rather singular that some flowers retain their position long after others of more recent introduction have fallen out of cultivation in gardens where only the best of everything are grown. In some cases this is due to their superior form, habit, or colour. There are many instances of this, and talking over the subject with an experienced and enthusiastic florist has reminded me that *Phlox coccinea* is one of such flowers. I cannot at present discover when it was raised or by whom. It has, however, been in cultivation for a good many years. Since it was first grown many bright-coloured varieties have been raised, but there are none of exactly the same shade and of equal effect. Some are of similar shade but defective in other respects; others with larger flowers are of inferior habit. Anyone looking through a good collection of *Phloxes* can hardly fail to be impressed by the appearance of this old variety. Its good habit, fine spike, and bright colour with healthy growth mark it as a variety of great merit. Its glowing colour is not that of the grand *Phlox Coquelicot*, nor is it that of *Etna*, but more of a glowing crimson.—S. A.

Cæsalpinia (Poinciana) Gilliesi.—It is very seldom that one sees this Chilean shrub flowering in the open air near London, but just now a specimen trained to the front of the museum overlooking the lake at Kew is in bloom. The general aspect of the plant reminds one of a rather attenuated *Acacia lophantha*, while the flowers, which are borne in a crowded terminal raceme, are yellow with prominent red stamens, which give to a head of bloom a fluffy appearance. Apart from the interest attached to it from the fact that we very rarely see it in bloom, this *Cæsalpinia* is decidedly ornamental when in that stage. In the more favoured districts of the country it will, of course, succeed better, and was last year noted in THE GARDEN as being in flower with Mr. Ewbank at Ryde. It was, however, there referred to under the generic name of *Poinciana*, in which genus it was formerly included. The *Cæsalpinias* and their near allies the *Poincianas* include among their number some very attractive flowering shrubs, which are, however, rarely met with. The best known and at the same time the hardest is *Cæsalpinia japonica*, a rambling shrub with prickly stems and spikes of canary-tinted blossoms, which are lit up by a cluster of bright red stamens in the centre.

This is fairly hardy in the open ground in the neighbourhood of London, and formed the subject of a coloured plate in vol. xl. of THE GARDEN.

Plumbago Larpentæ.—If, as one gathers, the proper name of this is *Ceratostigma plumbaginoides*, one must plead guilty of a strong disinclination to adopt that name in preference to the one at the head of this note, which is easier to pronounce, easier to spell, and easier to remember. It is, one knows, only in accordance with good practice to give the prior name the preference, but, after all, the real use of a name is that we may identify a plant. This flower is better known as *Plumbago Larpentæ* than as *Ceratostigma plumbaginoides*, and one need not hesitate to speak of it by the former appellation. Now (October 9) it is yet in bloom, and a look at its pretty blue flowers open in the sun of a late autumn day induces one to think that a note in its favour once more may lead to some other flower-lover adding it to her or his garden. Such a plant as *Plumbago Larpentæ* is worth cultivating if we can succeed in growing it. It is of neat, low-growing habit, and comes, moreover, at a time when a rock garden needs all the brightness one can give it. Its blue colour is also welcome. Its failing is a somewhat serious one, and it would be unfair not to state it fully. It lies in the fact that the plant comes so late into bloom that in cold places it is practically useless. It flowers with me annually, but it is grown on the top of what is probably my driest rockery, where it gets all the sun of summer, and is so dry that one is surprised that it is not injured by a continued spell of drought. It never suffers from this, and is among the plants which give hardly any trouble.—S. A.

Tropæolum tuberosum.—The other day I had sent me from Kerr Brothers, of Dumfries, some flowers of *Tropæolum tuberosum*. This was a pleasant surprise, as this plant seldom flowers with most of those who have tried it in our district in S.W. Scotland. This is unfortunate, as even those who are so successful with *T. speciosum* would appreciate highly the scarlet and yellow flowers of *T. tuberosum*. It is at all times a troublesome plant to induce to flower in the open, and they are fortunate who are happy enough to bloom it annually. It is fairly hardy in some gardens, but its disinclination to bloom is, of course, against its being largely tried either as a hardy or a half-hardy plant. This defect is one which is not confined to this district; nor is it one which has not given trouble ever since its introduction in 1827. It appears to have attracted a good deal of notice about the year 1837, as one observes from several communications in the "Floricultural Cabinet" for 1840. At that time great difficulty was experienced in flowering it, and this was the cause of the articles appearing in the "Floricultural Cabinet." Several growers detailed their practice. This was not uniform, but the most promising recipe appears to be that of adding lime rubbish to the soil, and in addition planting the *Tropæolum* against a wall. One correspondent added lime and Moss. This, he said, gave good results. The difficulty with us is that our summers are of too short duration, and that the plant is cut down by frost before it can come into bloom. To treat a plant such as this as a half-hardy one is not particularly desirable, and one would like to grow it altogether in the open. As a half-hardy flower it requires to be planted out after having made some growth under glass. While this note is somewhat despondent, it is written with a remote hope that someone may be able to throw some light upon the question of how to grow it. I have not taken it in hand myself for the reason that I have seen it tried unsuccessfully in gardens in which it is more likely to flower than in mine. Should no one be able to help us, the ventilation of the question will at least have the negative, but useful purpose of preventing some from wasting money, time, and space upon a beautiful creeper unsuited for the hardy flower garden.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

THE WILFUL DISFIGUREMENT OF FOREST TREES.

RECENTLY certain magazines and illustrated journals in the great chase after subjects for "copy" have dealt with the clipped gardens of England, and some of the most stupefying works in this way ever done have been chosen for illustration. Of English counties, Derbyshire is the most distinguished in this way. The Dutch, who painted like Nature and built like sane men, left their plantations to the shears, though they always cut to lines or some kind of plan, judging from their old engraved books. But British clipping has no relation to any plan, and in this they exceed in extravagance the Dutch, Austrian, and French, who at least clip their trees to bring them within bounds in garden, street, or by a canal. This peculiarly British mode of clipping single trees has done much harm, not merely in large private gardens, but even our public gardens. The late Mr. McNab, of the Edinburgh Garden, excellent planter though he was, had an idea that he kept his conifers "in shape" by clipping; nor is there a suburban district round London in which in our own day the gardener

on a distinct statement he generally falls into error. For instance, we are told that Elvaston, in Derbyshire, is not remarkable for natural beauty, and that the grounds there are so flat, that landscape gardeners, in despair of any other planting, are compelled to have recourse to topiary work; that

Even that man of fame, "Capability" Brown, seems to have shrunk from the work of laying out the grounds, for he bluntly wrote to the fourth Earl of Harrington, who invited him to undertake the task, that "it was all well, and he would let well alone." Whereupon the Earl demanded the reason for so strange a retort, and Brown replied, "Because the place is so flat," &c.

Instead of there being any truth in the assertion that we cannot make level ground beautiful by planting in natural ways, level ground has a great deal in it that is favourable to right and artistic ways of planting. That is to say, with flat ground we may more easily secure breadth, simplicity, and dignity; get dividing lines in the easiest way; richer soil and nobler, finer and more stately growth and essential shelter. Many of the most beautiful gardens in Europe are on perfectly level ground



Lawn with trees in natural form (Cassiobury).

does not run amuck with his shears to get the trees, as he calls it, "into shape." A false idea runs through all growers of the Pine tribe that the trees, the most frequent victims of this practice, should be kept in a pyramidal shape, the truth being that all the Pine trees in the world in their state of highest beauty lose their lower branches and show the beauty of their stem forms when growing in a natural way. The conical Pine is the seedling Pine. With a few exceptions, it is the way of these trees to shed their lower branches as other trees shed their leaves. By isolating conifers in our gardens and pleasure grounds we do indeed often lose this effect, as most Pines grow naturally in great colonies and groups, and protect and to some extent prune each other. Even in countries where the Pines often stand alone, as in the foot-hills of California, we have often seen them with a hundred feet or more of clear stem.

The writing about this subject is usually of that see-saw sort, praise and blame alternately, the writer avoiding any clear statement of his views, in accord with the artistic drivel of the day which leaves nothing clear, or if he ventures

—for instance, Laxenberg in Vienna, the English Garden at Munich, not to speak of many in our own river valleys and counties like Lincolnshire. What should be said of planting in all the lowland countries of Northern Europe if this assertion were true, to say nothing of the absurdity of assuming that the only way out of the difficulty is the stupid disfigurement of trees? We shall not imitate the example of these writers in leaving the matter in a fog of doubt, but state some reasons against wasting precious labour to rob trees of their natural charms. The old poets and satirists who laughed at it did not go into the reasons against clipping big trees, which are serious.

(1) LOSS OF FORM.—Tree form is so wonderful and beautiful, that the marvel is we should have to allude to its loss at all. But people may get so accustomed to surround themselves with ugly objects in their gardens, that they often miss what in nearly every parish in England one has only to walk a hundred yards or so to come face to face with, that is, lessons in tree form and beauty. Some protest against the cropping and docking of animals' ears and tails, but when the

worst in that way is done, the dog or the horse remains in his full beauty of form in all essential parts; but if we cut a noble tree which in natural conditions is beautiful in all its parts, we reduce it at once to a shapeless absurdity—that of a bolster standing erect being the usual result.

(2) LIGHT AND SHADE.—A great loss is that of light and shade—very important elements of tree beauty. These are entirely neutralised by shaving trees to a level surface, whether the trees take the form of a line or we clip them singly, as in the British phase of tree clipping we are now discussing. If we see old examples of the natural Yew, a forest tree and the commonest victim of the shears among evergreen forest trees, and look at them in almost any light, we may soon see how much we lose in destroying, with all our wasted wills, light and shade, as the play of these enhances the force and beauty of all the rest.

(3) COLOUR.—In gardens we are so much concerned with flower colour, that we often fail to consider the more delicate colours in Nature, and such fine tone as we see in a grove of old Yews bronzed by the winter, or Ilex with the beautiful silver of the leaf, or a grove of naturally grown, glossy, rich coral-bearing Hollies. Even the smallest things they clip, such as Juniper, have in a natural way much beauty of colour if left alone. The clipping of the Cherry Laurel into banks, as we see it at Mentmore, Cliveden, and, unhappily, a thousand other places in England, mars a tree naturally good in colour, and even the beauty of the large leaves is destroyed by the merciless shears. All the above-named trees, each a favourite subject for clipping, are many times more beautiful in colour than ever they are in the shorn state, the loss of the stem colour alone being a great one, as we may see by the "Pilgrim's Way," or anywhere where old Yews show their finely coloured stems.

(4) MOVEMENT AND SOUND.—In the movement of trees stirred by the wind and the gentle sighing of their branches we have some of the most welcome aspects of tree life. In the case of groups of Ilex, as at Ham House, and masses of it, as at St. Ann's, the effect of the motion of the branches is to many a very beautiful one. This movement is also of great beauty in groves of old Yew trees, and is seen in every Cedar and Pine that pillar the hills. The voice of the wind in these trees is one of the most grateful sounds in Nature, and has often inspired the poet.

(5) DEATH AND DISEASE OF THE TREES.—The constant mutilation leads to this not unfrequently, as may be seen constantly at Versailles. In the Derbyshire examples recently so much illustrated the stems of dead Pines are shown in the pictures. It is simply an end one might expect from the annual mutilation of a forest tree, as the Yew certainly is, as we see it among the Cedars on the mountains of North Africa, as well as in our own country and Western Europe. Other trees of the same great Pine order are yet more impatient of the shears than the Yew, and the dignity of some of them, like the Cedar, allows of its escape. However one distorts the Yew, we know that it is in Nature sometimes as fine as a Cedar.

(6) ANNUAL COST AND CARE.—Few begrudge outlay if it gives a good result; but merely to use the labour of many men with shears is to miserably waste both time and money when there is so much of the country yet to be planted with beautiful trees.

A statement which wearies us by its reiteration as well as its absurdity is that if we concede the right to clip grass, then also we are justified

in clipping trees. The answer is that grass is mown for our own comfort and convenience. There is a distinct and good reason for it, and by it we disfigure nothing. Moreover, short grass is not an artificial thing, as there are hundreds of natural lawns in the mountain ranges of Europe; and in mowing our lawns we are merely doing for our pleasure what exists to a vastly larger extent in many upland and hill countries.

The shopman, if we make a mild protest against the ugliest of his wares, tells us it is "a matter of taste," and, unhappily, many in all ranks have the same idea as to any artistic question—an idea that obscures all issues. But if we look into almost any artistic subject we find it is false as well as foolish. The difference between a portrait of Rembrandt in the noble series lately shown in London and the first Academy daub in pigments is a question not of taste, but of very awful fact; between an Elizabethan or Tudor house and one of the "carpenter's gothic" of our day; the sculptures of the Parthenon and the statues that adorn our squares; between the churches of Bourges or Lincoln and the first we meet in tin or plaster. But, vast as are the differences of these things, between none of them is there so great and hideous a difference in fact as between the divinely given natural form of the northern evergreen trees, whether those of the lawny slopes of Jura, the hills of the Pacific coast of America, or the rocks of Scotland, and the ridiculous and shapeless results of the wilful distortion of forest trees by man.—*Field*.

—Some time back you gave some instances of the practice of barbarously pruning forest trees in pleasure grounds, but I fear it is not sufficiently known to what an extent the practice has been carried and advocated by men calling themselves experts in the art of forestry. The Blue Book Report on Forestry, 1887, containing the proceedings of the committee and minutes of evidence has, perhaps, not been much read, but it contains some tit-bits from such "experts" that are well worth perusing, as showing what extravagant and fantastic methods of culture men calling themselves landscape gardeners and practical foresters have pursued on well-known estates where they were allowed a free hand by the proprietors. A witness, who was regarded as one of the most important summoned before the Committee on Forestry, stated that he had had about fifty years' practical experience in forestry; that he had had charge of some of the most extensive woods in England belonging to noblemen, with head foresters under him and about 100 men; that he had been professionally consulted as to the planting and management of woods all over Great Britain; that he had given his attention to the instruction of the persons who had the management and charge of woodlands; and the system he taught was as follows: First, he nursed the trees in plots in a nursery till they were about 5 feet high and seven or eight years of age (at which stage most respectable nurserymen burn their stock as unfit to be offered for planting); second, he then planted them out in the wood not less than 4 yards apart, or as wide as the ultimate crop was to stand; third, he trimmed the side shoots of the trees in by pinching every two or three years, "so as to get a mass of leaves all up the stem," till the trees were something like columnar Cypresses, we presume, and this pinching he practised on Firs like the Scotch Fir and others. I am exaggerating nothing. The non-practical mind even will realise that all this business meant enormous initial expense in plants and

planting, a thin crop of timber in the end even if all went well, and an army of men with telescope ladders periodically to go over the wood and perform the pinching, operations which if done would involve expense sufficient to swamp the whole business. I have often wondered what the woods managed in the above way were now like and what their owners thought of them. The "system," as its author called it, took no cognisance of such factors as density, overhead canopy, soil protection, thinning, or winds which were sure to overturn his tall plants every season until they would be growing at every possible angle and producing deformed trunks that no one would ever buy as timber. The examiners of this witness were Sir Edmund Lechmere, Sir Richard Temple, Mr. Munro Ferguson, Mr. Rankin, Mr. Acland and others, some of whom appeared tickled by the pinching process, and inquired of the witness if he really thought it would be more profitable to employ a large amount of capital in such an enormous amount of manual labour "than to leave the trees alone," and the answer was "Yes, most decidedly." About 300 trees to the acre, no intermediate fellings, realisation deferred to the far end, the trees for planting, seven or eight years old, to cost perhaps from £10 to £40 per 1000, and all to be trimmed like Azaleas or pyramid Pears. It puzzles one to guess how such notions on the subject of forestry could have originated. They could have no foundation in practical forestry, but might be derived from the plot culture of shrubs in a nursery. There is no worse practice than that of planting forest trees above 9 inches, or at most 18 inches high, and as young as possible. The most disastrous results have invariably followed the planting of trees 4 feet or 5 feet high and proportionately old, to say nothing of their cost. No nurseryman can prepare such trees for safe removal except by frequent transplanting. The expense is great and the buyer pays for it and gains nothing.—J. SIMPSON, in *Field*.

FRUIT AND VEGETABLE CROPS.

IRELAND.

Straffan House, Co. Kildare.—The fruit crop here is the worst for seventeen years, nearly all kinds being much under average, especially Apples, Pears, and Plums. Bess Pool is the only Apple with full crop. Continued east winds all through May were the cause of failure here. Apricots were splendid—the best I have ever seen. Bush fruits were good; Red Currants were the least good. Strawberries were an average crop, but suffered from rain, 4 inches having fallen in the first twenty days of July.

Vegetable crops on the whole have been good, and among Peas there are none better than Exonian, Veitch's Criterion, and Ne Plus Ultra. There is no better all-round Tomato than Hathaway's Excelsior, of which Hackwood Park and Ham Green are selections. Golden Jubilee is a splendid kind for dessert, and is preferred by some to Gage Plums.—FREDK. BEDFORD.

Fota, Cork.—Like most other parts of the British Isles we were visited with very cold, stormy weather when the fruit trees were in blossom, with the result that in many gardens not a Gooseberry set, and some other kinds of fruit were almost as bad. Apples are an average crop, the following a full crop: Lady Sudeley, Worcester Pearmain, Cox's Orange Pippin, Tom Putt, Blenheim Orange, Loddington, The Queen, Lady Henniker, King of the Pippins, Warner's King, Domino, Mère de Ménage, Hambleton Deux Ans, Bullinora Pippin, Grenadier, Annie Elizabeth, Bramley's, and Small's Admirable. Pears a light crop of poor quality. Beurré

Hardy, Gratioli, Louise Bonne of Jersey, and Doyenné du Comice are the best. Plums are a good crop, Victoria, Potts' Seedling, Monarch, Coe's Golden Drop, Kirke's, Prince of Wales, Jefferson, and Prince Englebert having very heavy crops. Peaches good crop, well-coloured fruit. The Strawberry crop is average; season short in consequence of heat and drought. Gooseberries abundant here, in places a failure. Other small fruits an average crop.

Vegetables in early season were very good; later, in consequence of want of water, crops poor and tough. Potatoes are of good quality; Ashleaf still the best early garden Potato for quality. Windsor Castle and Up-to date are good.—W. O.

Westport House Gardens, Co. Mayo.—Apples are a good crop in some cases; this applies to standard and bush trees as well as walls and espaliers. Pears are greatly under average; some trees have heavy crops. Cherries are poor; 17° of frost destroyed nearly all the fruit. Plums and all small fruits are good. There was a good crop of Strawberries here, except Guntan Park. Young plants of V. H. de Thury gave a splendid crop. There was a heavy crop of Gooseberries. Black, Red, and White Currants and Raspberries are good.

Vegetables on the whole very fair, except mid-season and late Peas, which are almost a failure.—JAS. MACKENZIE.

Headfort Gardens, Kells.—We had a nice show of blossom and expected a good fruit year, but frost, cold rains, and hail prevented the fruit setting. Strawberries were plentiful but small. Bush fruit very good.

Vegetables are very good. The second lot of Peas did not fill well on account of three weeks' hot weather. Potatoes are very good, especially Ashleaf Kidney.—JAMES HOUNSLOW.

Powerscourt, Wicklow.—Apples are carrying good crops. Pears are somewhat thin, Beurré d'Amanlis, B. Clairgeau, B. Rance, B. Diel, and Louise Bonne of Jersey being our best. Cherries are bearing an average crop, the old May Duke the heaviest; Morellos are very abundant and good. Plums, such as Rivers' Prolific, Victoria and Mitchelson's, have good crops; on walls, Kirke's, Denniston's Superb, and Victoria are a full crop; Apricot, Magnum, Washington, and Green Gage are not half a crop; other kinds almost nil. Apricots are average crop; on some of the trees the fruit is very rusty. Raspberries are a very good crop, fruit large, Superlative being the best variety in my opinion. Strawberries are very good, Royal Sovereign the best. All other small fruits are abundant and of good size.

With the exception of Beans (Broad) and Peas the vegetables are not equal to average years, especially on light land. All suffered more or less from the excessive heat and drought in the first fortnight of June.—DAVID CROMBIE.

Carton Gardens, Maynooth, Co. Kildare.—Apples are much below the average; Apricots very good; Cherries (sweet and Morello) a heavy crop; Plums light; Filberts and Walnuts plentiful; Strawberries, Gooseberries, Raspberries, Red and Black Currants a heavy crop and good.

The season has been good for vegetables; all kinds are plentiful and good.—A. BLACK.

The Gardens, Bessborough, Co. Kilkenny.—Generally speaking, this is a very good year in these gardens. Strawberries were an excellent crop, but out of a number of sorts two proved much the best, viz., Royal Sovereign and Latest of All. The former from an early border, planted July 28, 1898, was fit for use the first week in June. Latest of All in this garden is a grand variety, immense cropper, fine fruit, and of good flavour. Viscountess also proved one of the best varieties both for flavour and cropping. All Currants were very good, Gooseberries, Raspberries, and Morello Cherries also being very good. Pears are (as far as my experience goes here) a very uncertain crop. The trees are covered with bloom, which is usually destroyed by late spring frosts, only the trees on walls escaping. Apricots were

very good, the trees setting an immense quantity of fruit. The trees seem to do very well indeed, not dying back, as in some localities. Of Apples, there are heavy crops on the majority of trees; Plums, the best crop for three years; Figs, a nice crop also.—J. G. WESTON.

SUPPLEMENTARY.

Monmouth.—We have had but a poor season in Monmouthshire for either fruit, vegetables, or flowers. An early frost in May did much injury to one of the finest fruit prospects I have ever seen. This was followed by four months of continuous drought. I had an excellent Strawberry crop, though not of long duration. I mulched, as I generally do, heavily with old Mushroom manure, and was amply rewarded, especially with Royal Sovereign, Latest of All, Keans' Seedling, and British Queen. Raspberries, Currants, and Gooseberries are poor crops; wall fruit, Peaches, Nectarines, Plums, and Cherries utter failures. Figs, with the exception of Brown Turkey, are very poor, and even Brown Turkey not by any

growth above ground, but the tubers have been small. The soil here being little better than sand, it has been a very trying time. Every kind of fruit here requires to be netted this year owing to blackbirds, which eat even green Nectarines and Tomatoes as they begin to turn colour.—A. EAST.

Hackwood Park.—Apples are thin; a few having a full crop are Lord Suffield, Warner's King, Keswick and Potts' Seedling. Pears are much under the average. Some sorts of Plums have a full crop, Victoria, Rivers' Prolific, The Czar, and Monarch being the best. Peaches are scarce, and the trees badly blistered in the spring. Nectarine Early Rivers had a splendid crop; Apricots have failed; Strawberries were poor and fruit very small. All kinds of small fruit and Filberts are a full crop.—J. BOWERMAN.

Euholmes, Patrington, Hull.—Bush fruit has been good, also Strawberries, Royal Sovereign having been the best. The Apple crop is very peculiar, some trees being laden, while others have no fruit on them. Pears and Plums are a

Walnuts are very good in places. Strawberries promised a heavy crop, but took mildew just before the ripening period and partially failed.

Vegetables have done well, Peas being very good.—ALBERT PARRY.

Grimston Park, Tadcaster, Yorkshire.—We had a very dull, cold, ungenial spell of weather during the blossoming time of fruit trees, hence the crops are not abundant in any case. Frosts, too, were very frequent. In my opinion the non-setting of the abundant blossom was more due to the paralyzing effect of the wet, sunless weather than to the frosts. At any rate, we have had good crops of hardy fruits hereabouts when the frosts have been more keen than they were this year. Apricots are a good half crop, fruit fine in size and trees generally healthy. Branch-dying has been very rare up to date. If ripe wood is an absolute necessity for good crops of the delicious fruit there should be such next year, as we have seldom had a more profitable time for this process to be properly carried out. This remark applies to all well established hardy fruit trees. Our soil is a stiff, loamy one, about 3 feet in depth, overlying the magnesian limestone, hence if well soaked by rain in the early summer we do not feel the effects of continued drought as those situated on lighter soils. Apples are a partial crop, but promise to be a fairly good sample. Lord Suffield, Warner's King, Cockpit, Hawthornden, Worcester Pearmain, Yellow Ingestre, Winter Pearmain, Cockle Pippin, Lord Burghley, and Kerry Pippin have the best crops. Keswick Codlin, a very excellent early Apple for this part, is not doing well this year. Singular to say, blackbirds are eating up the early Apples. We had to pick our Lord Suffield and Ecklinville before they were quite ripe on this account. Plums, too, they have attacked, as also Tomatoes on walls. I have had to net the vineries also, or they would have soon destroyed the Grapes. Plums are not a good crop; Victoria and Early Rivers are the only varieties with anything like a crop on them. Dessert Cherries do not bear well. I had a very good crop of Morellos. Pears are very partial, Doyenné d'Été, Citron des Carmes, and that old fine-flavoured early Pear Ambrosia had all fair crops. I have a sprinkling of fruit on Doyenné du Comice, Marie Louise, Louise Bonne of Jersey, Thompson's, Ne Plus Meuris and Beurré Rance. Peaches and Nectarines are almost a complete failure on walls. Hale's Early is the only Peach that had anything like a crop. Currants, Red, Black and White, had good crops in each case; while not free from the Black Currant mite, it has not injured our crops up to now. Raspberries were a good crop. Another year's experience with Superlative bears me out in confirming my last year's note of it, viz., it is the best Raspberry I know of for this part. It throws up suckers somewhat scantily. Has anyone tried raising it from seed? Strawberries were a good crop, but, owing to the dry weather, soon over Noble is the earliest to ripen, but its flavour is not very good. Veitch's Perfection is a good variety. Royal Sovereign I like and grow. It is a grand Strawberry, but on some soils is very liable to mildew. For preserving, an old Yorkshire-raised Strawberry, viz., Newton Seedling, is bad to beat. Jubilee and Waterloo are very good late varieties. Walnuts are a good crop; Mulberries not so good as usual.—H. J. CLAYTON.

Madresfield Court Gardens, Malvern.—The fruit crops on the whole are peculiar, many trees being heavily laden, whilst similar kinds growing only a short distance away are quite barren. The trees flowered equally well, and the only conclusion I can arrive at is, the probability of waves of cold air of an unequal degree at certain critical periods. The intense drought of a second season has told heavily upon the size of the fruit as well as upon the shortness of the season for individual kinds. On the other hand, all fruits have possessed the fullest flavour. It has been a matter of no small difficulty to supply the roots with moisture, whilst the extreme dryness of the atmosphere has favoured insect attacks. There is evidence that growth will be well ripened, and



Old Yew hedges, Holme Lacy. From a photograph by Miss K. Pilkington.

means a large crop, yet the fruit was and is fine and of good flavour.

Vegetables nearly all failed. Asparagus, thanks to a heavy dressing of seaweed, was early, lasted well, and produced as fine a crop as could be desired. Tomatoes were not a success either indoors or out; they suffered, and are suffering, from blight and mildew, which I do not understand, as they had their usual treatment, which I have found generally successful.—G.WENT.

Brockhampton Court, Ross, Herefordshire.—Apples are very good; Pears very scarce; Plums a light crop with the exception of Victoria and Pershore; Peaches and Nectarines are good; Damsons fair; Raspberries and Red and Black Currants were very good, but Gooseberries were scarce; Strawberries were good, but very soon over owing to the intense heat and want of rain.

Vegetables have been fair. Peas have not done well, the blooms shrivelling up before they were expanded. Cauliflowers raised in pots in early spring were very good, but nearly all the others have gone blind. Potatoes made enormous

failure or nearly so. Peaches outside are a failure. This is owing to the very severe frosts in March when our trees were in full bloom. The frosts not only destroyed the fruit, but nearly killed the trees. Here in favourable seasons we can grow very fine Peaches outside.

Vegetables have not had a good chance, as the early part of the season was very unfavourable—first wet and cold, then a long dry time. Slugs and snails have been rampant this season, especially the latter. Potatoes, I think, will be very good.—J. WORTLEY.

Cut Hedge, Halstead.—Apples in this district are an uneven crop, some trees being heavily laden while others a few yards from them have none. Those bearing the best with me are Wadhurst Pippin, Claygate Pearmain, Betty Geeson, and Hawthornden. Pears all round are a light crop. Plums were very thin. The best here was Belgian Purple. Damsons are very poor; Cherries an average crop; Gooseberries and Red Currants very good; Peaches and Nectarines a failure; Apricots an average crop; Nuts scarce.

the assurance that, where tree roots have been fairly supplied with moisture, good, healthy flower-buds are in course of development for the next season. Apples have cropped best on garden trees where there is a better larder, and doubtless this will be repeated next year, for where shallow cultivation is practised, exhaustion follows, not that the roots necessarily go down deeper, but by heavy mulchings added, capillary attraction is set up and moisture at the root is conserved. Bush trees and cordons are loaded with high-class fruit, but old trees on turf are very indifferent. Pears are on a par with Apples. Apricots and Plums are half a crop, but of high quality and fine size. Cherries are very heavy crops. Peaches and Nectarines are splendid crops on south walls, somewhat smaller than usual, probably owing to a cold May and the tropical forcing weather ever since. Bellegarde on the Pershore Plum stock has proved satisfactory. Strawberries were very light and soon over, old plants nearly barren, chiefly owing to a lack of moisture at the roots last autumn. Young plants in deeply trenched and well-manured ground did well. I always grow Royal Sovereign as a biennial, taking one crop only. Gooseberries and bush fruits were fairly good, but not heavy crops.

One of the worst seasons I ever remember for vegetables, owing to the intense and protracted drought. Peas almost an impossible crop, owing to the extreme dryness in the atmosphere. Spinach and Turnips have given much trouble. Potatoes are much under-sized, but of good flavour.—W. CRUMP.

The Gardens, Tan-y-bwlch, N. Wales.—Of Apples the Codlins and Barnack Beauty are a full crop, the latter variety carrying a very heavy one. With these exceptions the crop is a failure, for I believe we have no more Apples in number than we have trees. Pretty well the same applies to Pears, and Plums are a failure. These crops have been scanty for the past two seasons notwithstanding a grand bloom each year. Sixteen degrees of frost and a heavy snowfall proved too much for Apricot bloom, although protected with netting; half a dozen fruit have been about our total. Gooseberries were a heavy crop and fine clean berries. Currants (Black, White, and Red) very fair. Raspberries were excellent in every way, clean and free from maggot; in fact, the cleanest lot I have had for the past twenty years. Japanese Wineberries also carry a very heavy crop; these come useful late. Strawberries were a variable crop, some kinds badly burnt up when the berries were half grown. The earlier kinds fared better than later sorts and were of a fair size, clean, and of excellent quality, but main-crop and late varieties were not so good, for I had no means of adequately watering them, and plants and fruit were quickly parched up. I think the most satisfactory main-crop kind this season was McMahon, which swelled up a heavy crop under very unfavourable conditions.

A wet, late spring followed by a dry summer is not exactly the conditions under which vegetables will thrive in this district, but, on the whole, they have turned out better than was anticipated. The first four or five sowings of Peas, despite all precautions, were destroyed by pheasants. Later sowings became crippled and almost barren owing to heavy and repeated attacks of thrips, while mildew was rampant, so that the supply was considerably curtailed until the late main croppers turned in. These have done much the best, for they have grown and cropped well. Gladiator has succumbed to mildew without bearing a dish. Cheltenham, Alderman, Veitch's Perfection, and Autocrat have been the best; Omega followed. Climbing and dwarf Beans as well as Butter Beans were good; runners set badly. Potatoes were a fair crop of even tubers, some slightly diseased. As only yellow-fleshed Potatoes are favoured here, Myatt's forms the bulk of the crop, for no variety I am acquainted with surpasses it for genuine Potato flavour. Spring Cabbages were late. Spring Broccoli, on the other hand, were very good,

plentiful supplies being afforded up to the middle of June. Early Cauliflowers also turned out well, but later ones, owing to want of moisture, are small and grubby. Onions are not large, but solid and free from maggot. Turnips, although quickly grown, cut up streaky and spotty, more so than usual, I think, while Carrots are not quite so badly infected as is usually the case on this land. Beet is clean and not too large. Asparagus has been late and weakly. Salading has necessitated much labour in watering to supply the demand and keep up high quality. Early planted Brussels Sprouts are looking well, but I cannot say so much for later and other winter crops, and, to add to the mischief, we were visited with a plague of caterpillars which, despite our efforts to destroy them, demolished every leaf of the Cabbage and Turnip tribe. They were in such numbers that they riddled a quarter of young plants in a few hours.—JOHN ROBERTS.

Addington Park, Croydon.—The fruit crops here are not half the average, although there was plenty of bloom. The late spring frosts no doubt prevented the free setting of the fruit. The bloom of all kinds here was papery and weak and did not look matured, owing, I have no doubt, to the dry weather we had last year. Gooseberries were abundant, but they did not ripen at all satisfactorily. The same may be said of Strawberries. Raspberries, however, were better than I have had for a number of years. Apples, Pears, Plums, Peaches, &c., are a partial crop, owing, no doubt, to the late spring frosts. For the last forty-five years I have observed the seasons, and I have no recollection of such a bad year as this.

The vegetable crops have been poor.—W. WHALLEY.

FLOWER GARDEN.

M. LATOUR-MARLIAC'S HARDY HYBRID WATER LILIES IN IRELAND.

As I have during the fine summer now coming to a close had the pleasure of blooming successfully, in a tank specially built for their cultivation in my vegetable garden, nearly all the finest varieties of these most beautiful and free-blooming plants for which the gardening world is indebted to the distinguished French hybridist whose name heads these notes, I hope that some account of my method of cultivation and of the varieties cultivated may be of some interest to those readers who may feel inclined to follow my example. The dimensions of my tank are 21 feet long by 9 feet broad by 3 feet deep. At the bottom I placed 16 inches of black slimy mud, mostly composed of decayed leaves fallen from trees surrounding the pond whence it was taken, with two rows of well-decomposed cow manure between the rows of plants. The tubers arrived from France by parcel post on May 6, and took about a month to establish themselves in their new quarters before they began to grow. Their development was surprisingly rapid. Early in July they commenced to bloom, and have produced an abundant crop of beautiful flowers during July, August, and nearly the whole of September.

The varieties planted were gloriosa, Ellisiana, Andreana, Robinsoni, lucida, Aurora, Marliacea flammea, Seignoureti, sulphurea grandiflora, Marliacea rosea, Laydekeri rosea, tuberosa Richardsoni, pygmæa alba, and pygmæa Helvola. Nearly all good judges of the respective merits of these hybrids are agreed that for brilliancy of colour the variety named ignea deserves the first place, but its flowers are, unfortunately, relatively small. This fine variety I have not yet seen. Next comes Ellisiana, and third gloriosa, but as

the flowers of this grand variety are nearly equal in size to those of the two first-named put together and are of a fine deep carmine with bright yellow anthers, many to whom size is of prime importance would place this first of all. It is also, fortunately, an extremely free and continuous bloomer. Andreana and Robinsoni are almost identical both as to colour and form of flower, the only recognisable difference being that the flowers of Andreana are rather larger than those of Robinsoni, but no one having one need plant the other, especially where it is desirable to have as many distinct sorts as possible in a limited space. Lucida has by far the handsomest foliage of any of them, and is of an extremely vigorous habit of growth. Its leaves are of immense size, handsomely mottled with deep maroon blotches, and borne on stout leaf-stalks of from 4 feet to 5 feet in length. The flowers are also of good size, with paler outside petals and clear deep rose-coloured inner ones, with yellow anthers. Aurora is also a pretty variety somewhat resembling the last-named, but with deeper coloured interior petals and smaller-sized flowers. It is of not nearly so vigorous a habit of growth or such handsome foliage. Marliacea flammea is, I think, rather inaptly named, as the colour of its flowers has nothing to do with flames, being of a deep vinous-purple. It is, however, a very distinct and handsome variety. Seignoureti, though it may have appeared distinct and good in its day when first sent out, is now no longer worth including in any collection of really choice varieties, as it may be described as a poor and pale form of lucida, which far surpasses it in every way in beauty. Sulphurea grandiflora is, unfortunately, rather a shy bloomer, but its very large and handsome flowers of a pale lemon colour, most of which are about 8 inches in diameter, stand well up out of the water, and open nearly flat in the full sun, making it indispensable for all first-class collections. The beautiful Marliacea rosea is so well known, having been sent out several years ago, that it needs no special description; but its large and delicately-tinted flowers have been as much admired as any in my tank. The beautiful Laydekeri rosea, which opens the palest shade of shell-pink, deepening as the flowers age till they end of a clear deep rose colour, is also extremely free-blooming and should be in every collection. Richardsoni is a perfectly cup-shaped flower of an exquisitely pure white, of medium size, and acts as a good contrast to the higher coloured varieties. It is, I believe, of American origin. Pygmæa alba is a most beautiful small flower of pure white colour, and p. Helvola has pretty creamy blossoms of an even smaller size, and may be described as a little gem amongst Water Lilies.

From America are promised for next season's bloom some wonderfully beautiful novelties, one of which is said to be of the brilliant colour of ignea, with the splendid size of gloriosa added. If this comes up to its raiser's description it should throw all other varieties into the shade, and prove indeed a grand acquisition to our water gardens. W. E. GUMBLETON.

Belgrave, Queenstown, Ireland.

Helianthemum amabile fl.-pl.—This is, I believe, to be the name of the variety alluded to in a recent number of THE GARDEN under the name of the Carton Sun Rose. It has been in Mr. G. F. Wilson's Wisley garden for some years without a name, and I have now a stock of it obtained from a plant that Mr. Wilson gave me. It is a really good thing, its merits being conspicuous in a hot, dry season like the one we have just passed through. Planted on a dry bank or on rockwork in the full sun it gives a nice bit of

colour and continues to flower all through the summer. Where the soil is very poor and gets much parched in summer this *Helianthemum* is quite at home, but does not extend very fast under such conditions. It assumes a shrubby, compact form, flowers more freely, and is altogether much more effective than where a richer soil induces a ranker growth. Plants that have run away a little too much to growth may be restricted and made to take on a more compact habit by means of hard cutting back in early spring.—J. CORNHILL.

Hemerocallis aurantiaca major.—This is certainly a grand *Hemerocallis* and well merits all that has been recently said in its favour in THE GARDEN, but at the same time—in some places at least—it does not flower with that freedom which one would wish. As stated on p. 251, it is certainly a good deer; still, many examples have come under my notice, both last year and this, which, though full of promise, failed to flower. The plants referred to were in different localities and under various conditions. Many bloomed in a satisfactory manner, but still the percentage of unflowered ones was considerable, and this I find is a very general complaint. It is such a grand plant when in bloom, that any hint how to render its flowering more certain would be welcomed by many.—T.

Sweet Sultans for market.—There are various shades of colour in the Sweet Sultan, but the yellow, to my mind, is by far the best; indeed, few things look better when carefully and not too thickly arranged in glasses. Recently I saw some long beds in a market garden near Norwich, and the assertion sometimes made by writers that these plants need lime in good proportion in the soil was borne out by the fact that close by the garden in question are large lime pits, the soil around no doubt being more or less impregnated with lime. At any rate, the plants had thrown a wealth of flowers and the various beds seemed even throughout. I have heard it stated that the seed should be sown out of doors, as the plants do not care for being transplanted. This may be true in some gardens. Those in question had evidently been transplanted, but not very early in the season, as the position was rather an exposed one. I think early sowing under glass is a mistake; better wait till April and then sow in a frame, keeping the young plants dwarf and stocky by admitting plenty of fresh air and thinning them freely as soon as handling is practicable. If left crowded, a weak, leggy condition follows, and the plants, more than many things, are slow in establishing themselves when transplanted. If the soil does not contain lime, a free incorporation of old lime rubble should be made. Adding animal manure is a dangerous practice.—C. N.

Tender Nymphæas in the open air.—I was pleased to read Mr. Burbidge's note in THE GARDEN, August 19, regarding *Nymphæa stellata* flowering in a lake at Carton, Kildare. This is the first time I have noticed such an account, and I hope many other growers may be stimulated to do likewise. There are several varieties that will respond to such treatment, notably *N. zanzibarensis* azurea, *N. z. rosea*, *N. cerulea*, *N. pulcherrima*, also *N. gracilis*. The best method to adopt prior to planting out is to start the tubers indoors. Plant the tubers in 4 inch pots, using a rich loamy soil. Place the pots in shallow water, about 6 inches of water over the pots, and the temperature of the water should be kept about 75°. They should be in a light, airy position, no shade at any time. In about four weeks' time the plants will require repotting into 6-inch pots, using similar soil as before, but the plants will require more room for leaf development and a few inches more depth of water. Where a tank cannot be called into service, wash-tubs or half barrels may be utilised, and to allow depth of water over the crowns of the plants use pans instead of pots. In four weeks' time from repotting the plants will be in fine condition to plant out. This in most instances should be June 1, and the plants if grown as directed will

be in bloom before this time. No better place can be conceived than a Melon pit for starting and growing tender *Nymphæas*. A section can be walled off, say two or three sashes, and made water-tight by a plastering of cement. A depth of 20 inches can be given, the young plants brought near the surface by using inverted pots to stand them on, and during the month of May plenty of air can be given and all the sunshine available, which will harden them off preparatory to planting out. A single plant may be placed in a tub or box containing about 10 cubic feet of soil and allowed to occupy a single sash, and when well established the sashes may be entirely removed during warm weather and replaced later when cool weather sets in if at all desirable to prolong the season.—W. THICKER, *Riccarton, N.J., U.S.A.*

CALIFORNIA BULBS FOR FORCING.

A CLASS of flowers, which for its ease of cultivation and brilliancy of colouring is but little known to eastern horticulturists, is the various sorts of Californian bulbs, *Brodieas*, *Calochorti*, *Camassias*, *Erythroniums*, *Fritillarias*, and *Lilies*.

BRODIEAS are in shape and appearance like *Crocus*, bearing grassy radical leaves, one or several slender stalks terminating in open umbels, or a dense umbellate head. The smallest bulb is a reliable bloomer, doing well in almost any soil and under any conditions; can be forced, or is perfectly hardy outdoors in the United States and Europe. The handsomest species are in point of colouring and size: *Brodiea peduncularis*, pure white, immense umbels of flowers; *B. ixioides splendens*, colour delicate yellow; *B. californica*, largest of all *Brodieas*, rosy lilac; *B. stellaris*, star-like clumps of a brilliant waxy purple; *B. coccinea*, glowing crimson; and *B. volubilis*, or Californian twining *Hyacinth*, stalks of a climbing or twining habit with beautiful rosy wax-like flowers. Splendid for forcing in pans or for cut flowers are—

CALOCHORTI.—The flowers resemble in form the *Tulip*, while the colouring and marking are marvellous. The best are *Calochortus splendens atrovirens*, a brilliant purple; *Calochorti* of Eldorado strain, in colours rose to red, creamy white, gold blotched, are marked with a showy eye, yellow to brown, beautifully dotted and lined; *C. venustus citrinus*, lemon-yellow with black eye; *C. clavatus*, orange; *C. macrocarpus*, lavender, banded with green; *C. nitidus*, lilac, with deep purple blotch in centre of each petal; *C. Vesta*, white, suffused lilac to rose and purple, centre red, back of petal purple; and *C. Gunnisoni*, pure white flowers barred with green.

CAMASSIAS are splendidly adapted for forcing. The flowers are borne in racemes; leaves long and glossy, like those of a *Hyacinth*; stem stout, 1 foot to 3 feet high. Among the best are *Camassia esculenta*, 1 foot high, deep blue; *C. Cusicki*, leaves 1 foot in length, flowers produced in great racemes, 2 feet to 3 feet high, pale sky-blue; *C. Leichtlini* alba, a pure white form; *C. Leichtlini*, tall, splendid purple.

DOG'S-TOOTH VIOLETS are noted for their large, Lily-like flowers and beautifully mottled foliage. They are easily forced. *E. grandiflorum* has large, bright yellow flowers; *E. revolutum*, large white flowers, tinted lilac; *E. r. Johnsoni*, flowers dark rose, orange centre; *E. giganteum*, cream; *E. citrinum* opens a pale straw colour, turning to pure white, with lemon centre; *E. Hartwegi*, delicate yellow; and *E. Hendersoni*, pale purple, with dark purple centre. Of

FRITILLARIAS, with their graceful, Lily-like flowers, the Pacific coast has many sorts. The finest: *F. recurva*, brilliant scarlet; *F. pudica*, clear, bright yellow; and *F. pluriflora*, crimson. Among the showy spotted or Leopard

LILIES are *L. Humboldtii*, clear orange, spotted maroon; *L. Bloomerianum*, tigered; *L. columbianum*, orange-yellow; *L. Bolanderi*, deep red; *L. pardalinum*, orange-red, scarlet tipped, thickly spotted maroon. *L. Parryi* is one of the finest *Lilies* in the world; flowers long, trumpet-

shaped, clear lemon-yellow, and very fragrant. *L. Washingtonianum* grows from 4 feet to 7 feet in height, with many pure white, trumpet-shaped flowers of great fragrance.—H. H. BERGER, in *Florists' Exchange*.

EUCOMIS PUNCTATA IN THE OPEN.

THE note by Mr. Arnott (p. 252) calling attention to this plant should induce other lovers of outdoor flowers to attempt its cultivation in borders, for variety is none too common late in September, its flowering season, as we are then confined almost wholly to the order of composite plants for what there is left to attract attention. The *Eucomis* is generally looked upon as a greenhouse plant, but is far more effective when grown outside, where there is room for its roots to ramble and for its wide-spreading leaves to develop to their fullest. The fact that it has lived and grown well in one of the borders here in Derbyshire for several years should be sufficient proof that it is hardy, except perhaps in the severest winters, for it has had no protection as far as I can learn, and it had none last winter. A clump growing on a raised border has now fourteen well-developed spikes, some being 3 feet high, on the least of which there are over 100 flowers. There is nothing very showy about the flowers as seen from a distance, but they well repay closer acquaintance. They are star-shaped and of great substance, having the appearance of being moulded in wax; the ground colour is greenish white and the dome-like centres are deep rosy purple, a colour with which the petals themselves become suffused as the flowers become older. The flower-stems are as stout as those of *Galtonia candicans* and thickly spotted with purple. In a cut state and under artificial light the flowers are charming, as the petals lose their green tinge and the centres look more rosy. The individual flowers then bear a striking likeness to those of *Hoya bella*, except that they are larger and six-petalled; they also emit a delicate and sweet perfume. As regards the position in which to plant the *Eucomis*, it appears alike at home in sunshine and in shade. It is growing in both here and equally well in either, but I may add that the shade is not that from overhanging trees, but from a low span-roofed house on the north side of which the bulbs are planted. Probably it would be unsafe to plant in ground below the surrounding level, and I should certainly choose a raised position for it.

J. C. TALLACK.

Cactus Dahlia Magnificent.—Various notes have recently appeared respecting this new variety. At first, owing no doubt to the dry weather, I was not pleased with it, but since rain and cooler weather have come, my opinion of its merits is considerably changed. It is now flowering beautifully; so free, and every bloom perfect. It is dwarf in habit and the stems are long. It requires but little disbudding; therefore one may get a mass of colour. The apricot tint is much admired, and plants of it are striking even among other good kinds.—H. S.

Anemone alpina.—I refer again to this beautiful *Windflower* by reason of the remarks of Mr. Arnott and "H. H." Daljarrock, Ayrshire, at p. 270. It is interesting to learn that one's experience is confirmed in these matters, and there is no doubt the plant is worth a good deal to make it a success. I am of opinion, too, that readers of THE GARDEN would thank "H. H." were he able to tell them something of the time that has been taken in building up the fine example he speaks of. In my original notes I touched but very lightly on the sulphur-flowered form of this plant, believing it to be generally understood that in their cultivation the two were as one. All the same, I quite agree with what has been advanced in respect to it, and the colour in particular. Nor is there the least doubt that seeds of these things afford the best facilities for securing a stock. The remainder is one of waiting and watching. A little more stress may,

perhaps, be laid on the fact that open-ground sowing is far better for such seeds than aught else, for the labour in watching and the like is not merely reduced to a minimum, but the seedlings, when these appear, are in safer keeping altogether. Those who would still like to try the stumps of these things, which as imported are known as plants, may like to know that the present is the season for securing them; secondly, that to plant these fibreless pieces in the soil is to court failure from the very starting point; and thirdly, to plant them in cocoa-nut fibre and ashes or the first named alone is to afford them the only possible chance of making fibrous roots, without which all are useless.—E. J.

SEPTEMBER CLIMBERS IN DEVON.

In a sheltered nook *Berberidopsis corallina* has borne its bright vermilion berries, and in the same garden a plant of *Bougainvillea speciosa* against a southern wall has produced flowers in the open. In the early days of the month the Virgin's Bower (*Clematis Flammula*) was a cloud of perfumed ivory-white blossoms, and the yellow-flowered *C. graveolens* and *C. songarica*—the blooms of *C. graveolens*, though of the same colour as those of *C. songarica*, being less than half their size—were in full flower. Now the blooms are for the most part succeeded by the feathery seed-vessels which in these species form quite as attractive pictures as those of the Traveller's Joy (*C. Vitalba*), that in the late autumn veils our southern hedgerows and woodlands with its smoke-grey feathery trails. Here and there the deep purple of *C. Jackmani* was to be discerned at the commencement of September, while varieties of the *C. lanuginosa* section have in many cases borne their widespread mauve or white stars throughout the month, one plant covering a porch not far from where I write being at this time (October 4) crowded with perfect blossoms, each from 5 inches to 6 inches in diameter. *Convolvulus mauritanicus*, though perhaps rather a trailing than climbing plant, may be mentioned as being in bloom during September, and *Muhlenbeckia complexa*, albeit a non-flowerer for all practical purposes, since its blossoms are inconspicuous, is most decorative when draping high wall, cliff, or tree trunk with its verdant cascade. *Lapagerias*, both white and pink, have blossomed well on a north wall in the open, and will continue to produce flower for some weeks should frost not intervene; indeed, I have seen fresh *Lapageria* blooms on the open wall in South Devon as late as mid-December during a mild winter. The blue Passion Flower is now extremely effective, though not by reason of its flowers, which have by this time for the most part faded. The oval fruits have now assumed their bright orange tint, and hanging thickly amid the dark green foliage present delightful effects. Some houses have their walls covered from ground-level to eaves with this Passion Flower, and the hundreds of bright globes strung on the dark background give the idea of an illumination. One of the sights of the month has been a fine plant of *Plumbago capensis* growing against a perpendicular cliff, sheltered from the north and east, in the public gardens at Torquay. This specimen must be 10 feet or 12 feet in height and almost as much in spread, and has produced a lavish display of pale blue flower-clusters. It is to be hoped that the plant in question, which has already passed three winters in the open unscathed, may remain uninjured for many more years and increase in size and attractiveness. *Solanum jasminoides* has become even whiter with bloom in September than was the case in August, when it appeared to have arrived at its culminating point of beauty, and in the closing days of the past month presented a lovely picture with its innumerable white flower-sprays hanging from the eaves downward, a very cataract of blossom. *Jasminum revolutum* is producing its bright yellow flowers, and on *Stauntonia latifolia* the long, rounded seed-pods are assuming a purple tint, while *Physianthus albens* bears its great irregularly-shaped, corrugated seed-vessels

as large as cricket balls on its straggling growths. Of *Tropæolums*, *T. speciosum* (the Flame Nasturtium) is for the most part displaying its purple seeds, but in certain instances is still in flower, this being the case in a garden I lately visited, where the branches of a Yew were still scarlet with this *Tropæolum's* vivid flower-trails. *T. tuberosum* is, however, at the present time more generally decorative than *T. speciosum*, its large orange and scarlet blossoms standing well out from the thickly growing background of leafage and presenting a brilliant autumnal picture. The climbing form of *T. Lobbianum* still retains its attractiveness and mantles walls with a veil of rich scarlet, while the gold of the Canary Creeper (*T. canariensis*) is still bright where seed has been sown in the open during the summer. Many of the Vines are becoming exceptionally beautiful, this being especially the case with *Vitis Coignetiae*, whose reddening leaves, when the level rays of the setting sun shine through them, assume a wonderful richness of colouring. The foliage of the Grape Vines shrouding a pergola is becoming of a pale yellow-green hue, and the thickly-set bunches of fruit that hang from the canopy are being rapidly rifled by the birds as soon as they exhibit a sign of colouring. *V. humulifolia* is a pretty and distinct Vine, especially charming when bearing its turquoise-hued fruit. The Virginian Creepers have been later than usual in changing colour, *Vitis inconstans* on cliffs and walls not having as yet attained the perfection of its autumnal brilliance.

S. W. F.

Dianthus Heddewigi for button-holes.—On several occasions I have potted up a few of the healthiest-looking plants of this *Dianthus*, and kept them going gently in a cool house or frame for a supply of button-holes through the early winter months. They are usually much liked for the purpose, especially if care is taken to lift only those with good coloured blossoms. The chief requirements are a cool and airy atmosphere in the house and not too much moisture either in the air or at the roots. The soil is a secondary matter, any light kind answering well.—H. R.

Lobelia Carmine Gem.—In the Gunnersbury House Gardens I saw recently the brilliant new *Lobelia Carmine Gem* in fine form. It seems to me to be an acquisition, as it was flowering more freely than any other of the section that I have seen this year. It has the branching habit of *Firefly*, and this habit, produced in such a dry and hot season, speaks volumes in its praise. It was not all due to the plants having received plenty of water, as I saw many plants of *L. Queen Victoria* in a swamp by the lake-side at Kew the same day, and these were not nearly so well flowered. The colour is one that requires to be used with judgment in the garden, as it would kill any other shade of red, and there are not many things with which it would blend. Probably it would look best grouped by itself in a green setting, but it is certainly a plant that should find a position in every garden, as its brilliance late in the season could not fail to please.—J. C. TALLACK.

Heliotropes in the flower garden.—Well-grown *Heliotropes* have a charm about them that is not associated with many other flowers. The wonder is they are not more frequently used in the flower garden. They look well in a mass with an edging of some other plant, but they seem to possess a bolder aspect when employed as dot plants in a groundwork of some other dwarf plant. For this purpose they need to be strong. The old Miss Nightingale was once a great favourite, and for massing still is, but some of the larger flowered kinds are finer for the purpose. Swanley Giant forms immense heads of fragrant flowers. Pot-grown plants trained into columnar shape are very striking plunged in beds among other flowers or on the turf. The finest *Heliotropes* for colour and size of their heads I remember having seen were at Gunnersbury House. These were planted among the small fibrous-rooted *Begonia Princess Beatrice*, a

variety that makes an excellent carpet. These at Gunnersbury were distinct in colour, and do as well in pots as outdoors.—S.

NOTES AND QUESTIONS.—FLOWER.

Cactus Dahlia Eileen Palliser.—This yellow sort is most attractive. It is of a deep rich tint, and the most remarkable thing in the flower is its fine full centre. This makes it valuable, because most of the yellows in commerce are wanting in that respect.—II.

Limncharis Humboldti not flowering.—I have grown this for the last two years in a tub in my greenhouse, but am much disappointed in getting no flowers from it, although it has produced abundance of leaves of large size. Can you suggest any reason for the want of flowers? I have been successful in flowering *Eichornia crassipes* in a pan in the same greenhouse in which a *Stephanotis* and a *Hoya carnosa* bloom freely.—C. J. F.

Selecting Cactus Dahlias.—When visiting Dahlias shows in the autumn, how often does one see persons jotting down the names of varieties which happen to take their fancy. It is well known that many would-be Dahlia growers visit shows for the purpose of selecting varieties for their own gardens in preference to making an examination of the growing plants in the nursery. It may happen that the flower showing up most conspicuously on the stand is never seen on the plant, owing to its short stalk and habit of hiding itself in the foliage. The moral then is obvious. Do not be led away with the appearance of Cactus Dahlias at shows, but see them growing before giving an order.—H. H.

GARDEN FLORA.

PLATE 1244.

PRUNUS PSEUDO-CERASUS (SINGLE VAR.).

(WITH A COLOURED PLATE.*)

THE accompanying plate represents one of the several single forms of the Japanese Cherry that have been imported from Japan during the last few years. This Cherry—the accepted name for which is now *Prunus pseudo-Cerasus*—is well known in our gardens and nurseries in its double forms, which are grown under various names, such as *Cerasus Watereri*, *C. Sieboldi*, *C. Lannesiana*, *C. Caproniana* fl.-pl., &c. These double-flowered forms vary in the size of the blossoms and in the depth of the rosy tints that suffuse the petals. Of their value as spring-flowering trees it is scarcely necessary to say anything at this date. Although eighty years have passed since the first plants were introduced, it would be difficult even now to name a more beautiful or desirable flowering tree. Perfectly hardy, easily accommodated, and never failing at the flowering time, the species combines in itself almost all the qualities that one asks for in an ornamental tree.

Of the new single-flowered varieties not much can yet be said. The charming spray, however, depicted on the plate shows that although so different from the big double blooms to which we are accustomed, the flowers possess all their charm and delicacy of colour, and if they are not so large they have an even daintier gracefulness. More than twenty varieties of *Prunus pseudo-Cerasus* are grown by the Japanese. About half of these they grow in pots for exportation, and they can now be obtained from nurserymen in this country. The flowers (which in these new varieties are double as well as single) range in colour from almost white to rosy pink. One variety the Japanese call *Ukon* is remarkable for the yellowish green colour that tinges the petals. The name *Prunus*

* Drawn for THE GARDEN by H. G. Moon in Messrs. Sander's nursery at St. Albans. Lithographed and printed by J. L. Goffart.



pendula which appears on the plate has been given, perhaps, to this Cherry because of its perfectly pendulous flowers. This name belongs, however, to a quite different tree—a Cherry from Japan, known in nurseries as *Cerasus pendula rosea*.
W. J. B.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

EARLY VINES.—Vines intended to be started in November should be pruned as soon as they are ready—that is, when the leaves have fallen. With me the leaves are being carried later than usual, but I look on this as a good rather than a bad

and that the bud points in the right direction. Where young rods are being run up to replace the older ones, all spurs on the old rods likely to produce shoots that would crowd growth on the younger rods next year should be sawn close off to the main stem, leaving, of course, those towards the top of the house until the full length of rafter is furnished by new rods, when the old should be cut out entirely. By a judicious use of this method on Vines that have become old, but whose roots are in good condition, the house may be refurnished with young rods without any perceptible loss of crop. Cleaning should follow close on pruning. Little, if any, bark should be removed except that which peels off, without using any force. Every portion of the house should be subjected to the scrubbing brush, soft soap and hot water treatment, which I have recommended for other houses in earlier notes, and, as a supplementary precaution in houses where mealy bug

BOTTLING GRAPES.—Where houses are leaky, or where plants have to come into the vineries at this time of the year it is a relief to get rid of the Grapes. To keep the latter in good condition for some months is a very simple matter provided one has a thoroughly dry room. The two essentials are dryness and coolness, and I find that the colder the store room is kept short of freezing the better the Grapes will keep. I have kept them all through the winter with no artificial heat, and I believe that those who have failed or partly failed to keep Grapes sound and plump after bottling them have done so through coddling them with fire-heat and over ventilation. The best Grape room I ever had was a loft, the windows of which were shut tightly and darkened all the time it was occupied with Grapes. There were no ventilators provided, and the only means of heating or drying used were a few gas-burners, which were seldom lighted. Pure spring water was used for filling the bottles, and this did not need changing during the whole period through which the Grapes were kept, neither was it often necessary to add any water, as the cool and somewhat close conditions which prevailed in the room brought evaporation to its lowest point. Another thing which I proved to be unnecessary was charring the freshly cut ends of the stems, the bunches being cut with sufficient length of wood to go fairly well down into the water, and in the case of bunches which were growing too near the rod to allow of sufficient wood below the bunch to reach the water, the other end was left long and the stem reversed. Before cutting the Grapes the room was subjected to a good drying-out process for a day or two, and the bottles were filled and put into position, after which it was only necessary to choose a bright dry day for cutting, divesting the wood of all leaves and leaf-stems; take the bunches direct to the room, and prevent spilling any water about when inserting the stems in the bottles. Each stem should reach the water and be pushed down 1 inch or 2 inches into it, as there will be some amount of absorption at first.

ORCHARD HOUSE.—As the various orchard house fruits are gathered the trees should be put outside in a nice open position, where they will not be subjected to drip from trees or overhanging buildings. Any that appear to require potting should be attended to, using the best loam it is possible to get, for these trees have much work to do with a very limited root-run, so that it is necessary to see that they have a good larder. Others may require attention in the way of drainage, for, in spite of the best care when potting, the drainage material is liable to get out of place, or clogged now and then, and this does much harm, as one cannot feed such trees when they require it so freely as one could wish to do. Renewing the

drainage is a matter that requires much care, and should only be put in the hands of a man with a good eye, for it is not easy to so adjust the new material that the tree will go back into its pot to the exact depth to which it had been; and, again, it should go into exactly the same position, for pots are sure to vary a little in shape, and a ball of soil filled with roots cannot be made to adapt itself to any other position than the one it has already occupied, and to alter this in any way is to store up future trouble. What little pruning has been necessary for pot trees will probably be done before now; if not, there should be no further delay in dealing with all kinds of stone fruits, especially Cherries, which are so susceptible to injury from the use of the knife, for by doing the pruning in late summer or during the autumn much of the danger of gumming is averted and the cut surfaces heal over more readily.

CORNUBIAN.



Example of terrace garden with trees in true form (Sandside, Thurso, N.B.). From a photograph by Miss K. Pilkington. (See p. 295.)

sign, especially as the foliage now left on is not that of the sub-laterals, but the main leaves of the laterals themselves, and these assist the buds greatly up to the time they drop. The wood is in fine hard condition, so that the buds can hardly fail to break well when the Vines are started. When pruning one always likes to cut back to a fairly plump bud, but I am not sure that harm has not been done at times by the advice to prune to the "best" bud, the "best" being sometimes interpreted to mean the largest bud within reasonable distance of the spur, and in this way not only have the spurs been lengthened inordinately and become ugly, but loose bunches instead of compact ones have resulted. There are some varieties which require to be grown on long spurs, but these are mostly late Grapes and not those chosen for forcing, therefore, of the latter it may be said that the closer back they are cut the better, provided a good leaf has ripened off at the same joint that has produced the chosen bud,

has appeared, it would be wise to rub petroleum into crevices in wood and brick-work. Then the Vines should be scrubbed over with a solution of some insecticide powerful enough to kill insect life, but not so strong as to injure the wood or buds. Mixtures of dressing thickened up with clay or some other dirty substance I never tolerate, for I look upon them as a filthy and useless nuisance, disfiguring to any plants which one may have to grow under the Vines during the spring time when the syringe is being used. After being scrubbed, the Vines should be suspended so that the ends of the rods are lower than the middle portion, and quite young rods may be tied to the trellis with their tips at the lowest elevation, as this will induce regularity in the breaking of the buds. Before reckoning the work complete, a little of the surface of the border should be carefully removed to get rid of any insects or eggs that may have fallen, and this should be replaced by some new soil.

KITCHEN GARDEN.

LIFTING EARLY BEETROOT.—Early-sown breadths of long varieties, also Turnip-rooted Beet, may now be taken up, sorted, and removed to the root shed. The best way is to size them, placing the coarsest by themselves for immediate use. The shapely, medium-sized roots are most appreciated for the salad bowl. Care must be taken when lifting not to injure the tap-root, and when removing the superfluous soil a knife should not be used, or the skin may be broken, and bleeding and consequent discoloration when cooked follow. Some gardeners cut the tops off close to the crown, but I think this wrong, as the knife is apt to go too deeply. The same thing sometimes happens when the tops are screwed off. Leave a fair length of leaf-stalk and store in moist soil or sand, putting a good thickness of the latter between each layer of roots. If any choice strain is needed for seed next year, the best plan is to select the required number of medium-sized, symmetrical roots and preserve them in a clamp by themselves. Cover with a good thickness of dry Bracken and afterwards with soil, sinking a Sea-kale pot at the top of the clamp as a means of ventilation in mild weather. During frost or snow the mouth of the pot must be stopped up. Where shed room of the right kind is scarce, every other row of roots may be lifted, and the others earthed up at the end of the month to protect from frost. Beet will stand a good few degrees of frost and take no harm if covered with Bracken or litter.

JERUSALEM ARTICHOKE.—These are considered better when the ground has been frozen; consequently lifting the main crop is postponed till November or December. Still, where they are now in demand a limited quantity may be lifted and covered with soil in a perfectly cool position in the open. All the small tubers should be reserved for seed in the spring. The Chinese Artichoke (*Stachys tuberosa*) is a favourite with many, and when properly cooked and served with sauce makes an agreeable change in the dining-room. The first or second week in November is a good date for lifting them, although they are quite hardy, and might, except for the inconvenience in lifting caused by frost, be left in the ground all the winter.

LIFTING HORN CARROTS.—Although Carrots are not easily injured by frost, it is far the best to lift the various sorts as they mature, so that the ground may be turned up as soon as possible and subjected to the beneficial influences of frost and wind. Moreover, digging roots during very severe weather is a very unpleasant, as it is also an unprofitable, operation. Where ample shedding exists it is a capital plan to let the Carrots lie loosely for a few days so that they may dry somewhat, and they can be sorted and finally stored on wet days. Carrots keep capitally in the open air covered with sand, ashes or leaf-mould; indeed, this is probably the very best position for late breadths which are to supply the kitchen during the spring months. The lifting must at present be confined to the Horn section, such sorts as Long Red Surrey, Altringham and some of the improved strains of Intermediate, which are about as long again as the original James's, being best left in the ground some time longer. Spring shrivelling is one of the evils resulting from too early lifting. Late-sown Carrots for autumn and early winter, whether grown in pits, frames or the open garden, must be kept quite free from weeds and rubbish, so that they may enjoy what sun there is and a free circulation of air.

WINTER TURNIPS.—Breadths of Chirk Castle or Orange Jelly sown for a supply during winter will now be of a considerable size, and may be encouraged by one or more moderate applications of guano or fish manure. Later batches having bulbs no larger than Walnuts will be much benefited by frequent stirrings with the Dutch hoe, as, provided the winter is mild, Chirk Castle will continue to swell till the new year, a portion of the sowing also supplying tender tops later on. Any full-grown bulbs of Golden Ball should be lifted and stored beneath ashes behind a north wall, as if left in the ground longer, splitting

and decay may in the event of excessive rains work destruction.

SALSIFY AND SCORZONERA.—It is too early yet to lift these, as healthy rows on good ground will increase in size and improve generally for some time to come. I am afraid many early sown lots will, owing to the tropical heat and drought, have run to seed. This should teach gardeners the folly of sowing this vegetable too early. Another good soaking of farmyard liquid may be given, as thin, wiry roots possess very little quality. The Russian is an improvement on the original strain.

ROUTINE WORK.—In many districts copious rains have fallen, these having induced fresh colonies of weeds amongst late-planted crops. After a few dry, windy days the hoe should again be put through and the weeds raked off. If left on the ground at this time of year they only grow again. Remove from the quarter all exhausted Pea, Bean, and Marrow haulm, and in gardens minus Box edging where salt is still used for killing weeds, give another and final sprinkling.

J. C.

ORCHARD AND FRUIT GARDEN.

LATE STRAWBERRIES.

In reading over the able article on the above subject in *THE GARDEN* for September 9 the following sentences rather surprised me, viz., "I cannot too much impress upon cultivators the importance of securing a crop the first year. It is seldom one sees that in gardens, but it is just as easy to have the crop as not. Layer the Strawberry runners in July on a ridge of good soil laid between the rows," &c. With me the Strawberry is a very important crop, and the garden soil a very light loam on gravel. I have for years gathered the finest dessert fruit from plants planted early in August of the previous year. I also know many other gardeners who do the same; indeed, the practice is by no means so very uncommon as your correspondent "J. S. W." would lead us to suppose. At one time, when living in Roxburghshire, in Scotland, I used to pinch off all the flower-stems the first year, and by so doing secured immense crops of large fruit the second and third years. James Veitch Strawberry treated in this way produced the largest and finest fruits I have ever seen, yet the same variety only succeeds moderately here, soil and climatic conditions being so diverse. Under this method of culture I used to have a grand supply of excellent fruit for dessert.

My method for years past has been as follows: Early in July I have the required number of 4-inch pots prepared by placing a piece of turf in the bottom without any crocks, then filled with good loam to which a little leaf-mould is added. The pots are then taken on a hand-barrow to the Strawberry quarter and placed between the rows of plants. The runners are pegged into the pots with Bracken twigs, which suit very well and are easily made and quickly used. As soon as the runners are rooting into the pots they are severed from the parent plants, the pots removed to a convenient place (each variety stood separately), which makes watering easier and more quickly performed. All the ground for Strawberries is trenched during the winter from 2 feet to 3 feet deep, heavily manured and generally cropped with early Peas. When the Pea crop is cleared off, a heavy coating of well-decomposed farmyard manure is dug in, the ground then made firm by rolling or by treading, the rows then marked out and drills drawn with a draw-hoe. The plants are laid out along the drills, each pot being dipped in a bucket of water before being turned

out. This, I find, prevents any plant being set out with the ball dry. This season, owing to extra pressure of work at the time, I had a number of runners layered in soil placed between the rows, carefully attended to with water afterwards, lifted when rooted, and carefully planted in a break where another thousand plants were planted out of pots, the difference between the plants being most remarkable. The pot plants started away freely and have not required half the attention in watering the others have. The whole break was planted in the second week of August, and even now (September 12) one can see at a glance the benefit of layering into pots. Some may think it a heavy undertaking to layer Strawberry runners into pots, yet it is not so. The pots I use are those the bedding plants are turned out of. Sometimes the pots are washed before being used for the Strawberry runners, but as often not; indeed, I have never noticed any difference so far as washing the pots is concerned. After many years' practice I am confident it pays well in the long run to layer into pots, and is after all a saving of labour compared with the layering into soil.

In the same article referred to the writer, in treating of mulching, recommends short grass from the lawn mower. I have tried most, if not all, of the different materials recommended from time to time for mulching newly-planted Strawberries, and have long since come to the conclusion that nothing equals old hotbed materials. For mulching to keep the fruit clean, nothing I have ever tried equals clean Wheat straw, being easily and quickly applied after the fruit is set. It has a clean appearance, and even if battered down with heavy rains expands again with sunshine. When cleared off after the fruit is gathered it does well for littering. My motto in Strawberry culture may be summed up very shortly. Select an open site; trench in autumn or winter 2 feet or 3 feet deep; manure heavily with farmyard manure. Before planting the Strawberry plants, give a good dressing of decomposed manure; dig it deeply in; make the ground firm after digging; water the plants well after planting; mulch with old hotbed material if weather continues dry; water repeatedly, and the following season the result will be a fine crop of splendid fruit.

As to varieties, I have tried many, both new and old, and find after several years' experience that it is quite impossible to have Strawberries anything like so late in the south as in the north, or even in the midlands. My best late sort taken all round here is President. Keens' Seedling planted in August last year ripened its fruit this year in the second week in July; so much for lateness. Elton Pine got so eaten up with red spider on our light soil that I have discarded it altogether, although in Sussex on a cooler subsoil it succeeded admirably. Alpines I do not grow, as Strawberries are not wanted after August. My forced Strawberries are wanted about the middle of March, and the supply is kept up until the outdoor crops are ripe. I rather think Strawberries in September are more of a novelty than anything else in this part at least, there being so many other fruits fit for dessert at that time. DAVID KEMP.

Stoke Park Gardens, Slough.

Apple Tyler's Kernel.—The present season appears to have suited this Apple, as the fruits individually have grown to a very large size and have coloured splendidly. Although by no means a new sort, it is not so well known out of its native county of Hereford as it deserves to be. It is a first-rate Apple in every respect as regards size, colour, and quality. It is also an

excellent market variety, as it is not only a good bearer, but is also a healthy and vigorous grower, and soon forms a good tree. Tyler's Kernel received a first-class certificate from the Royal Horticultural Society in 1883, but it has been grown in Herefordshire orchards for many years.—A. W.

Apple King of the Pippins.—Good as this Apple is and prized for dessert, a good deal has been said and written against it by those who happen not to have succeeded with it. Some consider it an uncertain Apple as a standard on the Crab, but I have seen many fine old trees so grown, with lofty, wide-spreading heads, bearing annually heavy crops of the finest fruit. My belief is that King of the Pippins should not be planted in low-lying positions or in cold, retentive soils. By far the best trees I have seen have been in light, well-drained soils. In the former it is likely to canker and die off. I lately saw a grand tree in a villa garden in the rudest possible health and carrying a good crop of full-sized, clean fruit. Such fruit in a season like the present is sure to be appreciated, and would if sold fetch a good price. I prefer the upright-growing variety, which bears very conical, highly-coloured fruit.—C. N. N.

Young Strawberry plants.—Those gardeners who this year planted their young Strawberry plants on solid ground, either between rows of spring-sown Onions, the latter being 2 feet apart or on plots prepared some months beforehand and well trodden or rolled several times, will now be reaping the benefit. Such a medium retains the moisture much better and encourages the formation of a colony of fibrous roots. Those who neglected to mulch round the young plants, especially on shallow, warm soils, will find that, owing to excessive evaporation, growth is less vigorous than usual. Plants treated as above, and watered say twice with farmyard liquid, or even given a sprinkling of some quick-acting artificial manure before the mulch is laid on and then watered home, stand an infinitely better chance of developing robust foliage and prominent crowns than those put out in loose, dry ground and allowed to take care of themselves.—J. C.

PEARS ADOPTED BY THE CONGRÈS POMOLOGIQUE OF FRANCE.

(Concluded from p. 235.)

ORPHELINE D'ENGHIEN (*syns.*, *Beurré d'Arenberg*, *Beurré Deschamps*, *Beurré des Orphelins*, *Colmar Deschamps*, *d'Arenberg parfait*, *Duc d'Arenberg*).—Originally raised about 1820 by the Abbé Deschamps, director of the Orphan Hospital at Enghien, Belgium. The fruit is of medium size, pyriform, with a very bumpy surface. The stalk is short, stout, fleshy, set sideways, level with the fruit or in a small cavity. The eye is small, irregular, almost closed in a normal and regular cavity. The skin is rough, yellow, stippled and streaked russet almost all over. The flesh is whitish, very delicate, and melting. A very good fruit, ripening November—January. The tree is of medium vigour on the Quince, of good and sustained fertility. In cultivation this variety, easily trained, is not hardy, and does best as an espalier. It makes better growth on the Pear.

PASSE COLMAR (*syns.*, *Ananas d'hiver*, *Cellite*, *Fondante de Paris*, *Passe Colmar doré*, *Passe Colmar gris*, *Passe Colmar tardif*, *Passe Colmar vineux*).—Obtained originally by the Abbé Hardenpont at Mons. It first fruited in 1758. The fruit is medium or fair-sized, turbinate, more or less long and more or less regular. The stalk is of medium strength and length, set obliquely on the point. The eye is medium-sized, open, set in a superficial depression. The skin is thin, yellow, stippled grey, washed carmine on the sunny side. The flesh is white, very delicate, and highly aromatic. A very good fruit, ripening December—January. The tree is of normal vigour on the Quince and of great and sustained fertility, but with sometimes long interruptions.

In cultivation this variety is suitable for regular forms, especially those attached to trellises, upon which its fruit, which is very liable to fall, hangs better.

PASSE CRASSANE.—Originally obtained by M. Boisbunel, of Rouen. It first fruited in 1855. It is a medium or fair-sized fruit, in form Bergamot. The stalk is fairly thick, of medium length, set straight in a small cavity. The eye is medium-sized, open, in a wide, shallow and regular cavity, the skin rough, pale dull green, streaked and stained red-brown, changing to light yellow on the sunny side. The flesh is very white, delicate, and agreeable. A very good fruit, ripening January to March. The tree is of continuous vigour on the Quince, of good and sustained fertility. In cultivation this variety is easily trained and demands no particular care.

PRÉCOCE DE TRÉVOUX.—Originally obtained by M. Treyve at Trévoux (Ain). It first fruited in 1862. The fruit is of medium size, oftenest in Bon Chrétien shape, widely truncated at the stalk, which is of medium length and thickness, set rather obliquely in a little russet-covered fold. The eye is small, closed, with erect sepals generally projecting from a slight wrinkled rose-stained depression. The skin is delicate and tender, bright yellow, very finely stippled green, washed rose-carmine on the sunny side. The flesh is white, delicate, juicy, and agreeably aromatic. A good or very good fruit, ripening the beginning of August. The tree is very vigorous and fertile. In cultivation this variety is suitable for all forms of a certain extent. On the Quince it comes early into bearing.

PRÉMIÈRES D'ECULLY.—Originally obtained in 1847 by M. G. Luizet, senior, of Ecullly-sur-Lyon. It first fruited in 1855. The fruit is fair-sized, truncated and embossed at the stalk. The stalk is stout, swollen at the point of attachment, of medium length, curved, set rather obliquely in a wide, superficial cavity. The eye is medium, half-closed or open, in a somewhat deep wrinkled and embossed cavity. The skin is smooth, light yellow, slightly shaded rose on the sunny side, finely stippled greenish grey. The flesh is white, very juicy, and with a very agreeable musky flavour. A very good fruit, ripening September to October. The tree is vigorous on the Quince, of great and sustained fertility. In cultivation this variety is easily trained, and lends itself to all forms. On an espalier the fruit is of excellent quality.

PRESIDENT DROUARD.—Originated among some seedlings found near Pont de Cé (Maine-et-Loire) by M. Olivier, gardener at Angers. The fruit is fair-sized, the stalk short, rather bent, set rather obliquely in an irregular embossed cavity. The eye is small and open, in a deep and regular cavity. The skin is nearly smooth, slightly unctuous, a uniform yellow, finely stippled tawny. The flesh is white, delicate, and agreeably aromatic. A very good fruit, ripening January. The tree is vigorous and fertile. In cultivation this variety lends itself to all forms on the Quince.

PRESIDENT MAS.—Originally obtained by M. Boisbunel, of Rouen. It first fruited in 1865. The fruit is large, conical, the stalk short, of medium stoutness, set rather obliquely in a small, rather embossed cavity. The eye is medium-sized, open, in a deeply embossed cavity. The skin is rather rough, yellowish green, much stippled russet, streaked and stained tawny about the eye. The flesh is white and very agreeably aromatic. A very good fruit, ripening November—January. The tree is vigous and fertile. In cultivation this variety requires to be grafted on the Quince. Its vigour and neatness make it suitable for all forms.

PROFESSEUR HORTOLÉS.—Originally obtained by M. F. Morel, of Lyons. It first fruited in 1864. The fruit is fair-sized, taking generally the Beurré d'Amanlis form, sometimes calebass form. The stalk is stout, short, set obliquely in a small embossed cavity. The skin is smooth, delicate greenish yellow, heightened with rose, and streaked red-brown on the sunny side,

stippled grey all over. The flesh is white, delicate, and delicately aromatic. A very good fruit, ripening September—October. The tree is very vigorous and very fertile. In cultivation this variety, sufficiently vigorous on the Quince, lends itself to all forms. The finely coloured and pretty-to-look-at fruit finds a quick sale in markets.

ROUSSELET D'AOUT (*syn.*, *Gros Rousselet d'Aout*).—Originally obtained by Van Mons at Brussels and propagated by M. Millot at Nancy. The fruit is medium-sized, pyriform. The stalk is long, stout, curved, set at the point of the fruit. The eye is large, open, set flush with the fruit or in a slight depression. The skin is smooth, light yellow and green, stippled grey-green, shaded rose on the sunny side. The flesh is white, melting and agreeably aromatic. A good fruit, ripening in August. The tree is vigorous on the Quince, of good, but inconstant fertility. In cultivation this healthy, vigorous variety is well adapted for regular forms. It behaves well as a standard on the natural stock.

ROUSSELET DE REMIS (*syns.*, *Perdreau musqué*, *Petit Rousselet*, *Rousselet musqué*).—Of ancient unknown origin. The fruit is small, the stalk thin, of medium length, curved, set nearly straight at the point. The eye is large, open, regular, set flush with the fruit. The skin is smooth, pale yellow, tinged reddish brown on the sunny side and stippled grey all over. The flesh is yellowish white, richly and agreeably musky. The fruit is good raw and very good cooked. The tree is of normal vigour on the Quince and on the natural stock of very great and sustained fertility. In cultivation this variety is rather delicate, and only does well on dry, high soils. It is best grafted on the Pear and trained as a standard.

ROYALE D'HIVER (*syns.*, *Duchesse de Montebello*, *Pera Casentina*, *Pera Passana*, *Spina de Carpi*).—Of ancient and uncertain origin. The fruit is large, the stalk long, slender, but thickened at the two ends, set obliquely in an irregular embossed cavity. The eye is medium-sized, regular, open, in a wide, irregular depression; the skin citron-yellow, washed orange-red on the sunny side, stippled and mottled tawny; the flesh yellowish and well flavoured. A good fruit, ripening November—January. The tree is vigorous on the Quince and on the natural stock, and requires age to fruit well. In cultivation this variety is easily trained and behaves well as a standard in the southern climates, but requires an espalier and a good exposure in cold soils.

ROYALE VENDÉE.—Originally obtained in 1860 by M. Eug. des Nonhes in his Cacauidière property in the commune of Ponzange (Vendée). The fruit is medium-sized, blunted near the stalk. The stalk is fairly short, generally thick and fleshy, set obliquely against a small mound. The eye is large, open, regular, almost projecting. The skin is rough, dull yellowish green, slightly mottled, and streaked grey and light tawny. The flesh is yellowish, melting, very juicy, and delicately aromatic. A very good fruit, ripening January—March. The tree is moderately vigorous even on the natural stock and of great fertility. In cultivation this variety is suitable for all stocks. Pyramids are generally very good the third year.

SAINT GERMAIN D'HIVER (*syns.*, *De l'Arthe-loire*, *Inconnue la Fare*, *Saint Germain*, *Saint Germain doré*).—A chance seedling, found on the borders of La Fare, at Saint Germain d'Arce, near the little town of Lude (Sarthe). The fruit is medium or fair-sized, long, pyriform, often irregular in contour. The stalk is of medium length and thickness, set rather obliquely on the blunted point of the fruit. The eye is medium-sized, half closed, almost projecting. The skin is rough and thick, greenish yellow, stippled red, slightly golden on the sunny side. The flesh is white, delicate, and distinctly aromatic. A very good fruit, ripening November—March. The tree is vigorous on the Quince, of very great and sustained fertility. In cultivation this variety forms excellent pyramids, but is delicate. As an espalier it does well.

SAINT GERMAIN PANACHÉ.—This variety is distinguished from the type by its mottled yellow and green branches, as also by the fruits, which are fair-sized and light yellow, being marked with little longitudinal bands.

SAINT GERMAIN GRIS (*syn.*, *Saint Germain brun*).—Originally found about 1804 by M. Prévost in the old monastery garden of Saint Ouen, Rouen. A medium-sized fruit, the stalk thickish, curved, set rather obliquely in an oblique depression. The eye is medium-sized, open, and but slightly depressed. The skin is wrinkled, grey-green, stippled and streaked brown; the flesh yellow, juicy, and distinct in aroma. A very good fruit, maturing November—January. The tree is moderately vigorous on the Quince. In cultivation this variety should preferably be grafted on the natural stock.

N.B.—Many pomologists are of opinion that Saint Germain gris is only a variety of Saint Germain d'hiver and Saint Germain panaché.

SAINT MICHEL ARCHANGE.—Of uncertain origin. It is believed to have been raised in the neighbourhood of Nantes at the middle of the last century. The fruit is medium-sized or fairly large, pyriform. The stalk is thick, sometimes rather short, set on the point or in a slight cavity. The eye is small, almost closed, in a wide and embossed cavity. The skin is delicate, green, stippled tawny, washed and streaked orange-red on the sunny side. The flesh is yellow, delicate, and very juicy. A very good fruit, ripening September—October. The tree is of normal vigour on the Quince, of great and sustained fertility. In cultivation this easily trained variety does well as a pyramid.

SAINT NICOLAS (*syns.*, *Beurré Saint Nicolas*, *Duchesse d'Orléans*).—Originally found by M. Maurier at the Garenne de Saint Nicolas at Angers, and propagated by M. Flon in that town. It first fruited in 1839. The fruit is medium-sized, the stalk thick, swollen, and fleshy at the two ends, of medium length, set obliquely at the point of the fruit. The eye is medium-sized, half closed, placed almost flush with the fruit or in a wide depression. The skin is fine, bright yellow, streaked light tawny, with orange tones on the sunny side. The flesh is yellowish white, very delicate, melting, and deliciously aromatic. A very good fruit, ripening October. The tree is of normal vigour on the Quince, but of inconstant fertility. In cultivation this variety does best in a well-drained, generous soil, and is best grafted on the Pear.

SECKEL (*syns.*, *New York Red Cheek*, *Seckle Pear*, *Shakespeare*).—Originally found, about 1760, on the banks of the Delaware River, in a forest of Philadelphia. The fruit is small or turbinate, round-headed, the stalk short, set in a scarcely perceptible cavity. The eye is small, regular, open, set flush with the fruit. The skin is thin, rather rough, dark yellow, covered with golden rust, washed largely dull red on the sunny side. The flesh is white, delicate, half-melting, and highly aromatic. A very good fruit, ripening September to October. The tree is insufficiently vigorous on the Quince, of precocious, very great and sustained fertility. In cultivation this variety should be grafted on the Pear. It is especially adapted for standards.

SENATEUR VAISSE.—Originally obtained by M. Lagrange at Oullins, near Lyons. It first fruited in 1861. The fruit is medium-sized, conical, as wide as high. The stalk is thick and fleshy, of normal length, seldom short, set in a small embossed cavity; the eye small, irregular, in a deep, wide and embossed cavity; the skin fine, bright yellow, stippled and streaked tawny, mottled red on the sunny side. The flesh is yellowish, very juicy, and delicately aromatic. A good fruit, ripening August to September. The tree is of medium vigour on the Quince, of good vigour on the natural stock, of great and sustained fertility. In cultivation this variety behaves well in all forms.

SEIGNEUR (*syns.*, *Belle Lucrative*, *Bergamote Ficée*, *Beurré Lucratif*, *Fondante d'Automne*, *Fondante de Mantebeuge*, *Gresillier*, *Seigneur Es-*

peren).—Originally obtained by Major Esperen, of Malines. It first fruited in 1827. The fruit is medium or of fair size, the stalk short, fleshy, often ringed, set almost straight in a small crease. The eye is small, open, in a wide depression. The skin is rough, light yellow, mottled and streaked tawny, with a warmer tone on the sunny side. The flesh is white, delicate, very juicy, and deliciously aromatic. A very good fruit, ripening September to October. The tree is of normal vigour on the Quince, of early and constant fertility. In cultivation this variety succeeds on all stocks and lends itself to all forms. The fruit should be gathered at intervals.

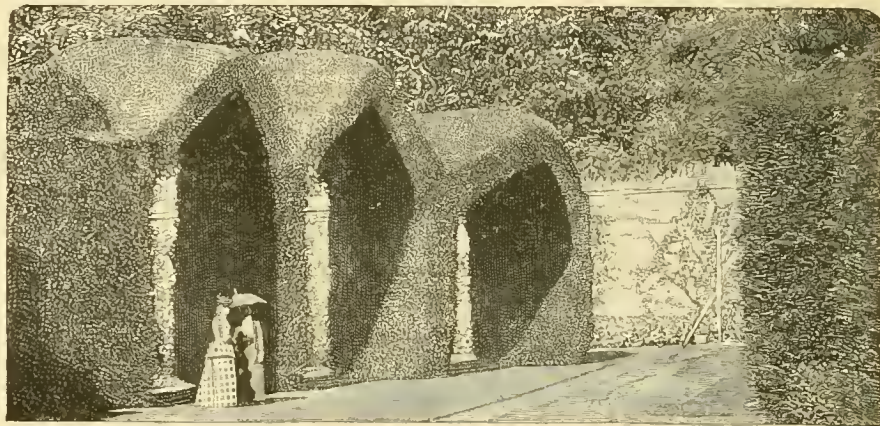
SEUR GREGOIRE.—Originally raised by M. Gregoire-Nélis, of Jodoigne (Belgium). It first fruited in 1858. The fruit is large, Bon Chrétien in form. The stalk is of medium stoutness and length, set in a deep and embossed depression. The eye is large, open, in a deep, bumpy depression. The skin is wrinkled, thick, yellow, streaked and stained reddish grey, and shaded dull red on the sunny side. The flesh is white, melting, and agreeably aromatic. A very good fruit, ripening November—January. The tree is of normal vigour on the Quince and fertile. This variety does best in a light, warm soil.

SOLDAT LABOUREUR (*syn.*, *Beurré de Blumenbach*).—Originally obtained by Major Esperen, of Malines. It first fruited in 1820. The fruit is of fair size, ovoid pyriform, or turbinate. The stalk is of medium length or short, sometimes woody,

and stout, sometimes more slender and of medium length, set most frequently in a small embossed cavity. The eye is large, open, set in a deep, shallow cavity. The skin is thin, golden, stained light tawny near the stalk, tinged with rose on the sunny side. The flesh is white, melting, and slightly musky. A good fruit, ripening August to September. The tree is of normal vigour on the Quince and fertile. In cultivation this easily trained variety does well on all stocks and succeeds in all forms.

SUCRÉE DE MONTLUÇON (*syns.*, *Sucrée verte*, *Sucrin vert*).—Originally found about 1812 in a hedge of the Montluçon College garden by M. Rocher, the gardener. The fruit is of fair size, generally turbinate, and as wide as high. The stalk is slender, of medium length, set rather obliquely in an embossed cavity. The eye is large, regular, half-open, in a shallow, generally regular cavity. The skin is grass-yellow, stippled brown, and of a warmer tone on the sunny side. The flesh is white, delicate, and pleasantly aromatic. A good fruit, ripening September to October. The tree is vigorous on the Quince, of good and sustained fertility. In cultivation this variety succeeds in all positions and soil, and adapts itself to regular forms.

SUZETTE DE BAVAY.—Originally obtained by Major Esperen, of Malines. It first fruited in 1843. The fruit is small or medium-sized, round, conical, more or less short. The stalk is short, woody, straight, in an embossed cavity. The eye



Clipped arches of Yew. (See p. 295.)

sometimes stout and fleshy, set straight in a shallow depression. The eye is large, half closed in a narrow and shallow cavity; the skin smooth, bright yellow, mottled and streaked with russet. The flesh is yellowish, very juicy, and aromatic. A very good fruit, ripening October—December. The tree is of normal vigour on the Quince, of precocious and sustained fertility. In cultivation this easily-trained variety does best as an espalier or in a sheltered position, as the fruits are apt to fall.

SOUVENIR DE BREUIL PÈRE.—Raised by M. Dubreuil when professor at the Jardin des Plantes, Rouen, and sent out by M. Nicolle, of Rouen, about 1856. It is a medium or fair-sized fruit, round, conical, more wide than high. The stalk is slender and short, set in a fairly deep, wrinkled cavity. The eye is small, open, regular, in a narrow and medium deep cavity. The skin is very fine, yellow, stained and streaked with light red. The flesh is white, melting, juicy, and pleasantly aromatic. A very good fruit, ripening November—January. The tree is of middling vigour on the Quince and of medium fertility. In cultivation this variety requires some care to adapt it to regular forms. It does well as an espalier.

SOUVENIR DU CONGRÈS.—This, originally obtained by M. Morel, of Lyon-Vaise, first fruited in 1863. It is a large or very large fruit, pyriform and embossed. The stalk is sometimes short

is medium, closed, irregular, almost prominent; the skin smooth, light green, changing to citron-yellow, streaked brown, slightly orange on the sunny side. The flesh is white, melting, and delicately aromatic. A good fruit, ripening January to April. The tree is of continuous vigour on the Quince, of precocious, very great and constant fertility. In cultivation this variety is easily trained and lends itself to all forms. The pyramidal form is the best for it.

THOMPSON'S (*syns.*, *Van Mons*, *Uesembeck*).—Originally obtained by Van Mons at Dijon before 1820. The fruit is of fair size, obtuse or turbinate. The stalk is short, of medium stoutness, set obliquely in an embossed cavity. The eye is of fair size, open in a superficial depression; the skin light yellow, streaked with grey, mottled and stained with russet. The flesh is white, melting, with a slight aroma of rose. A good or very good fruit, ripening October—November. The tree is of very continuous vigour on the Quince, of good and sustained fertility. In cultivation this variety is easily trained, and forms generally satisfactory pyramids.

TRIOMPHE DE JODOIGNE.—Originally obtained in 1830 by M. Bouvier, burgomaster of Jodoigne. It first fruited in 1843. The fruit is large, in form Bon Chrétien. The stalk is of medium strength and length, set rather obliquely on the fruit. The eye is medium-sized, open, often irregular, in a shallow, broad cavity. The skin

is smooth, light green, changing to citron, washed and stippled dull red on the sunny side. The flesh is white, pleasantly aromatic, and subject to decay at the core. A good fruit, ripening November—December. The tree is vigorous on the Quince, of great and sustained fertility. In cultivation this variety requires care to maintain it in regular forms. It adapts itself well to the espalier form.

TRIOMPHÉ DE VIENNE.—A chance seedling found by M. Cl. Blanchet at Vienne (Isère). The fruit is large, slightly angular, resembling Bon Chrétien in the thickness of its form. The stalk is of normal length and stoutness, set straight in a small wrinkled cavity. The eye is medium, open, in a deep cavity surrounded by bosses. The skin is bright yellow, mottled and finely streaked with russet, tinged rose on the sunny side. The flesh is white, melting, very juicy, and delicately aromatic. A very good fruit, ripening end of August and September. The tree is vigorous and fertile. In cultivation this variety is easily trained and lends itself to all forms.

VAN MONS—LÉON LECLERC.—Originally obtained by M. Léon Leclerc, of Laval, and dedicated to Van Mons. It first fruited in 1828. The fruit is large, cylindrical. The stalk is of medium length and stoutness, set sideways and flush with the fruit. The eye is small, open, regular, in a wide, shallow depression. The skin is grass-yellow, much mottled, and streaked russet. The flesh is greenish, very melting, and delicately aromatic. A very good fruit, ripening October—November. The tree, insufficiently vigorous on the Quince, is fertile. In cultivation this variety is delicate, and requires to be grown as an espalier. It grows more freely on the Pear.

VICE-PRESIDENT DECOYE.—Obtained in 1871 by M. Arsène Sannier at Rouen. A medium or undersized fruit, sometimes turbinate, more frequently barrel-shaped, swelling in the middle, and narrowing equally to the two ends. The stalk is sometimes short, stout, and swollen at the point of attachment, set obliquely at the point. The eye is medium, sometimes open, sometimes closed, in a shallow depression; the skin yellow, mottled and streaked tawny. The flesh is white, slightly gritty, very juicy, and agreeably aromatic. A good or very good fruit, ripening in October. This variety is suitable for all medium forms on the Quince; on the Pear it is slow to fruit.

VIRGOULEUSE (*syns.*, *Bufaleuf*, *Chambrette de Glace*, *De Laborie*, *Paradis d'hiver Virgoulée*, *Virgoullette*).—Originally discovered at the village of Virgoulée, near Limoges, about 1650. The fruit is medium-sized, ovoid; the stalk medium, long and stout, rather fleshy near the base, set flush with the fruit; the eye small, open or half closed in a wide wrinkled depression. The skin is smooth, unctuous, tender green, finely stippled and slightly streaked russet; the flesh white and distinctly aromatic. A very good fruit, ripening November—February. The tree is vigorous on the Quince and on the Pear, of very great and sustained fertility. In cultivation this variety does especially well on the Quince, and is grown as an espalier to have sound and abundant fruit.

ZEPHIRIN GREGOIRE.—Originally obtained about 1831 by M. Gregoire-Nélis, of Jodoigne, Belgium, this Pear first fruited in 1843. A small or scarcely average sized fruit, round, conical or turbinate, much embossed. The stalk is of medium length, fleshy near the fruit, which it continues; the eye medium, often irregular, set in a shallow, irregularly embossed cavity; the skin light citron, finely stippled green, stained reddish brown, and tinged red on the sunny side. The flesh is white, melting, and very pleasantly aromatic. A very good fruit, ripening December—February. The tree is delicate on the Quince, of good and sustained fertility. In cultivation this variety is easily trained and ought to be grafted on the Pear for large forms.

BARONNE LEROY.—Originally obtained by M. Th. Boisbunel, of Rouen, in 1870 from a sowing made in 1859. It is a medium sized fruit, hol-

lowed somewhat at the base and rather angular at the top. The stalk is of medium length and stoutness, sometimes long, set straight in a fold. The eye is medium sized, almost closed or half open, in a deep and regular cavity. The skin is yellow, almost wholly tinged with dull red, stippled and slightly streaked russet, and somewhat rough. The flesh is white, luscious and aromatic. A very good fruit, ripening October—November, the tree vigorous and fertile. In cultivation this variety on the Quince forms pretty pyramids.

BERGAMOTE HÉRAULT.—Obtained by M. A. Héralut at Angers from a sowing in 1860. It first fruited in 1870. The fruit is large, irregularly and obtusely hollowed at the base, somewhat angular and embossed. The tawny-coloured stalk is short and stout and very fleshy, set straight in a hollow. The eye is small, closed or half-closed in a narrow depression, more or less deep and wrinkled. The skin is citron-yellow, stippled and streaked russet, especially round the eye and stalk. The flesh is white, somewhat gritty at the centre and delicately aromatic. A very good fruit, ripening December—January. In cultivation this variety grafted on the Quince is suitable for all forms.

BERGAMOTE SANNIER.—Originally obtained in 1870 by M. Arsène Sannier, of Rouen, and brought out in 1874. The fruit is generally average sized, depressed at the ends, and narrowing from the middle to the base. The stalk is short, stout, fleshy, rather inclined in a wide, shallow cavity. The eye is small, half-open, in a wide, very deep cavity. The skin is smooth, dull green, stippled russet on the shaded side, olive-green and glossy on the sunny side. The flesh is white, gritty, otherwise delicate and with a peculiar and agreeable aroma. A very good fruit, ripening January to March; the tree vigorous and very fertile. In cultivation it requires no particular care.

BEURRÉ AMANDE.—Originally obtained in 1870 by M. Arsène Sannier, of Rouen, from a sowing in 1861; brought out in 1874. The fruit is of fair size, of Bon Chrétien form, sometimes turbinate and variable in height, generally angular; the stalk of middling length, stout, and rather fleshy, set sometimes straight, sometimes obliquely in a crease. The eye is small, closed or half-closed, in a narrow, embossed and generally shallow cavity. The skin is citron-yellow, slightly stippled red, more or less stained russet. The flesh is white, gritty at the core. A good fruit, ripening October. In cultivation the tree grows vigorously on the Pear, but is long in fruiting on the Quince. It answers in all forms.

CHARLES COGNÉE.—Originally obtained by M. Charles Cognée, of Troyes, and brought out in 1879. It is of middling size. The stalk is short, of medium strength, set straight, or nearly so, in a deep and much embossed cavity. The eye is open or closed, in a regular and deep cavity. The skin is unctuous, citron-yellow, golden in the sun, and streaked tawny. The flesh is white, somewhat gritty at the core, delicate, melting, mildly and pleasantly flavoured with almond. A good fruit, ripening February to March. The tree is of medium vigour on the Quince and very fertile. In cultivation this variety is fairly vigorous on the Pear. It generally does well as an espalier.

CHARLES ERNEST.—Originally obtained by M. Ernest Baltet, and brought out in 1879 by Baltet frères, of Troyes. A large fruit, somewhat angular. The stalk is short, stout, and curved, set nearly straight on the point or in a crease. The eye is medium, open, with erect sepals, set in a wide, wrinkled, and ribbed cavity. The skin is citron-yellow, often slightly tinted rose on the sunny side, very finely stippled grey on the light side, stippled green on the shaded side. The flesh is white, melting, and aromatic. A fairly good fruit, ripening November—December. The tree is vigorous. It is an easily trained variety, lending itself to all forms, and is at home in all positions.

FONDANTE FOUGÈRE.—Obtained by M. Fougère at St. Priest (Isère) in 1878 from a sowing made in 1871, brought out in 1887. It is of fair size,

irregular in contour, and rather bumpy. The stalk is of medium length, stout, generally swelling at the two extremities, especially the point of attachment, set straight or nearly straight in an embossed hollow. The eye is half closed in a shallow and regular cavity. The skin is pale yellow, much and finely stippled red with some tawny streakings, tinged and stippled rose-carmine on the sunny side. The flesh is white, somewhat gritty near the core, delicate, and agreeably aromatic. A very good fruit, ripening January to March. The tree is of middling vigour, hardy and fertile. This variety is vigorous in nurseries, but less so planted out in the garden. It requires grafting on the Pear. It fruits early.

FAVORITE JOANON.—Obtained in 1883 by M. Joanon at Saint Cyr au Mont d'Or, and sent out in 1889. The fruit is of fair size, narrowing to a blunt point and rather angular. The stalk is stout, somewhat swollen at the two ends, set obliquely on the point. The eye is medium-sized, closed, or half closed in a regular, wide cavity of medium depth. The skin is smooth, yellow, stippled grey, turning to rose, stained a light russet near the stalk. The flesh is white, melting, very juicy, and pleasantly aromatic. A very good fruit, ripening end of August and commencement of September. The tree is of normal vigour, hardy, and fertile. On the Quince this variety is suitable for all regular forms.

GIRAM.—A chance seedling found in a hedge on the Giram estate, near Nagaro (Gers), propagated by Dr. Doat and M. Bazillac. The fruit is small, sometimes rather turbinate, rounded at top, and narrowly obtuse at base. The stalk is long, stout, set almost straight upon the fruit. The eye is medium, open, with erect sepals on the rounded and rather russet summit of the fruit. The skin is rather glossy, apple-green, stippled dull grey, often rose-bronze, and sometimes red on the sunny side. The flesh is very delicate, tender and melting, and pleasantly aromatic. A very good fruit, not liable to turn off, ripening during the first fortnight in August. The tree is fairly vigorous, hardy, and fertile. This early variety is suitable for exposed situations.

JANSEMINÉ (*syns.*, *Canette de Boncouge*, *Jeanette*, *Morille-Bouche de Bordeaux*).—Of ancient unknown origin, the fruit under the average in size or small, and as wide as high. The stalk is stout, set sometimes obliquely in a wide, shallow cavity, sometimes nearly straight in a slightly marked fold. The eye is large, open, in a wide cavity of variable depth. The skin is grass-green, stippled greyish red, shaded light maroon on the sunny side; flesh white, gritty at the core, rather crisp, and pleasantly aromatic. A fairly good fruit, ripening the middle of July and beginning of August. The tree is of normal vigour and of very great fertility. It is best as an orchard tree. The variety is much valued in the Bordeaux country owing to its great fertility and earliness.

MME. CHAUDY.—Obtained by M. Chaudy at Chaponost (Rhône) from a sowing made in 1861 or 1862, and sent out in 1882. A large fruit, sometimes taking Bon Chrétien shape. The stalk is stout, fleshy, short or medium, set nearly straight in a crease more or less deep. The eye is small, closed or half-closed, in a regular and shallow cavity; the skin slightly rough, pale yellow, stippled grey, red on the sunny side, streaked and stained light russet, especially at the two ends. The flesh is fairly white, gritty at the core. A very good fruit, ripening November. The tree is of normal vigour on the Pear, weak on the Quince. It is fertile and bears early. This variety is suitable for small forms.

NOTAIRE SEPIN.—Originally obtained by M. Rollet at Villefranche (Rhône) about 1860. It is a large Pear, varying in form and size, sometimes Bon Chrétien shape. The stalk is stout, swelling generally near the fruit, set somewhat obliquely or straight in a crease or a more or less marked cavity. The eye is small, closed or half closed, in a medium and wrinkled cavity. The skin is slightly rough, yellow, stippled red, mottled and

streaked russet. The flesh is white, gritty at the core, very juicy, and aromatic. It is very variable in quality, and ripens in January to April. The tree is vigorous and fertile. This tree is suitable for all forms on the Quince, but grows too freely on the Pear to fruit early.

Peach Princess of Wales.—As I have in the past frequently complained of the want of quality in this strikingly handsome Peach, I think it only right to say that this season it has been much better. There is less of the woolly fleshed fruit this year than usual, and it has been much liked in the dining-room. My experience of it leads me to think that it requires a good position and should not be allowed to bear too heavily. The fruit should not be allowed to hang until dead

STOVE AND GREENHOUSE.

AZALEAS.

AZALEAS, with fair treatment and reasonable attention to their well-being, never fail to do well and to outlive the greater portion of other hard-wooded kinds grown in pots; in fact, Azaleas are amongst the longest lived of the various tribes of greenhouse plants. In proof of this I may instance several large collections that are in the hands of some of the market growers near London, many of the specimens in which are known to be fifty years old. They consist mostly of the old white *indica alba* and *Fielder's White*, which is only slightly different

year. As soon as all the flowers are cut, the plants are started into growth in heat and kept there until the buds are as big and plump as large Apple pips, after which, to prevent their blooming before the flowers are wanted, the houses are either thrown open or the plants are moved to the open air. But when the latter course is followed with plants that are forced to come in early, and which are afterwards kept for six months under glass with fire-heat until the weather comes hot, it has a widely different effect to that which follows when plants that do not bloom until the end of the winter or in spring are put out either as soon as they are well out of bloom or whilst the young wood and leaves are both soft, and



Azalea Mrs. Turner; flowers pink, with white margin.

ripe, but be pulled when just a little force has to be used, or the flavour will be spoiled.—H. R.

Apple Beauty of Bath.—Anyone thinking of planting Apples to come in early in the season may with advantage add this to his list, for it is of good quality for an early kind. Being very firm, it will doubtless bear travelling better than *Duchess of Oldenburg*, *Lady Sudeley*, and others of that ilk, while its appearance is all in its favour for market work. The tree is a vigorous, healthy grower, and apparently does well under various forms of training. In a heavy, cold soil it thrives well and the fruit puts on a good colour, which is more than can be said of many kinds.

from the original sort. The plants in question are as full of vigour as it is possible for them ever to have been. They make shoots from 8 inches to 15 inches in length annually, only a small percentage of which fail to flower. The whole of the flowers are cut with from 4 inches to 6 inches of wood attached. The plants are models of skilful cultivation; many of them run from 7 feet in height to 9 feet or 10 feet in diameter, though they are subjected to hard forcing, every year coming into bloom at the beginning of November and onward up to the commencement of the following

the ripening process has not commenced. Yet this is the way that in nine cases out of ten Azaleas are treated. The outcome of this barbarous exposure of plants that have flowered at the end of winter or in spring, when, to do justice to them, all the time that intervenes between their going out of bloom and the close of summer they should be in a genial growing temperature under glass, is that Azaleas are, as a rule, the most unhappy-looking things to be seen in most gardens. One of the results of thus turning out the plants directly the danger from frost is over or soon after is that they

never attain the size they should, although the annual growth is not sufficient to admit of much in the way of cutting, unless the flowers are taken off with a scrap of wood that makes them all but useless.

Another source of weakness that Azaleas, in common with most other hard-wooded plants, suffer from is want of sufficient nutriment. In the case of pot plants of the numerous kinds that bear partial shaking out and repotting annually, the old material which has become exhausted is to a great extent got rid of and its place supplied by new. With Azaleas and other things of a like description, the nature of which is such that they will not submit to be treated in this way, the roots remain for years in the same soil, and unless something is done to make up for what the roots extract from it, the whole becomes so poor that the plants cannot do more than exist in it. This especially is what takes place with old specimens that, after being put into pots as large as it is convenient to give them, shortly become dependent on what they receive in the shape of manure in some form. That old Azaleas can be kept for any length of time full of strength and vigour I have proved with specimens that have remained undisturbed in the same soil for ten years, and at the end of that time they made as much wood as when they were young. It may be well here to say that peat of even the best quality is not rich enough to enable Azaleas to make the growth they should do. The assistance that is required in this way to either get young Azaleas on quickly or to keep up the vigour of old plants is much more than seems to be generally supposed. When ordinary manure-water is used for old specimens it should be given once a week during the time the plants are making their growth, and up to the time the wood is approaching a hard, mature condition and the buds are prominent. After this stage has been reached it is doubtful if manure in any shape does not do more harm than good. GROWER.

Schubertia grandiflora.—This plant, noted by "C." on p. 265, has now been in cultivation ten or a dozen years and was more popular eight years ago than now. I think one reason why it lost favour was the rather unpleasant scent of the flower which "C." mentions, and again the brownish tinge about the blossoms and the rambling habit are against it. But many have given up its culture because of its liability to insect pests, and especially mealy bug a way of begging the question that ought to commend itself to few gardeners, for if a plant has sufficient beauty to make it worth growing it is certainly worth keeping clean. I was always rather attracted by it. I like the wild and free manner of its growth and flowering, and if started clean in a moist atmosphere, I had no more trouble in keeping it clean than I had with the rough-leaved *Dipladenias* of the *amabilis* section. Still, it is some years now since I saw it in anything like good condition, though it is often to be seen in the form of a half-starved plant in many stove collections. Possibly "C." will be better acquainted with *Physianthus* (*Schubertia*) *graveolens*, and *S. grandiflora* is a very near relative. It should be allowed to have its head in a sunny, hot and moist house and be well fed at the roots when in active growth.—H. R.

—This stove climber, alluded to on p. 265, has been grown extensively for the last ten years or thereabouts. At one time it was spoken of as a formidable rival to the *Stephanotis*, but the unpleasant smell of the blossoms and the still more disagreeable odour of the leaves if they are rubbed have tended to curtail its popularity. It both grows and flowers freely, while cuttings of the young shoots taken in the spring, put into pots of sandy soil, and kept close and shaded soon root.

It is a native of Brazil and was introduced in 1835, but was apparently lost, or nearly so, till 1886, when Mr. Bartholomew, Park House, Reading, received seeds of it from a friend in the Argentine Republic. The plants obtained therefrom flowered freely, and a first-class certificate was awarded it by the Royal Horticultural Society on September 13, 1887. Though usually spoken of as *Schubertia grandiflora*, it is often met with under the name of *S. graveolens*, while our botanical authorities include it in the genus *Physianthus*, with the specific name of *P. graveolens*. The nearly hardy *P. albens* is related to this, the flowers being much in the same way, but not so large.—T.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

THE meeting on Tuesday last was a very instructive and interesting one, illustrative of the season in more ways than one. The most notable, as it was also the most extensive, exhibit was that of the Michaelmas Daisies from Trent Park, Barnet, which were thoroughly representative of this fine class of autumnal flowers. The staging, too, was in good taste, reflecting as it did on the whole the greatest credit upon Mr. Lees. Of autumn tints there were several examples to be seen in the cut specimens from Coombe Wood, also of berry-bearing subjects. In both instances these were composed of either rare or seldom seen plants. Fruit, too, was well represented, a splendid collection coming from Barham Court and another from Hayes Place. Potatoes, too, were contributed, beautiful samples to the eye, with shapely tubers and clear skins (too clear, in fact, for the liking of many). A capital lot of early *Chrysanthemums* was likewise on view from Earlswood; the majority of these staged in masses, with buds and foliage as grown, being far and away more attractive than formally set up flowers; a few large blooms, too, were included, but these did not comply with the regulations of the floral committee, being supported with wires around the base of the florets. A good group of decorative plants came from Edmonton, and a capital selection of London shrubs from Tulse Hill, with *Nerines* and other seasonable things from Highgate and cut flowers (hardy) from Thames Ditton. Orchids were not present in any quantity, owing no doubt to the state of the weather. The lecture on insect pests should be looked for in the next issue of the Journal, it being a subject full of interest and instruction to gardeners.

Orchid Committee.

Awards of merit were adjudged to the following:—

CATTLEYA DOWIANA AUREA (Little's variety).—This is a beautiful form, showing more of the characteristics of the Costa Rica forms of *C. Dowiana* than most of the varieties of the so-called *C. aurea*. The sepals, of fine form and substance, are deep yellow; the petals heavily fringed on the margin, deep yellow, with a few purple streaks at the base. The lip is rich crimson-purple around the margin, suffused and veined with deep orange-yellow, the whole of the centre suffused with a distinct bronzy purple. A cut flower came from the collection of Mr. H. Little, The Barons, Twickenham.

ODONTOGLOSSUM CRISPUM DAPHNE.—In this, though somewhat starry in shape, the sepals are white, with a distinct blotch of violet-purple almost wholly covering the centre. The petals are white, with two or three purple spots; the lip white in front and around the fringed margin, the whole of the centre covered with a bright blotch of brown. This distinct and pretty form has many of the characteristics of *O. Wilckeanum*, and may ultimately have to be classed as a variety of that hybrid. From Mr. W. Thompson, Stone, Stafford.

ODONTOGLOSSUM GRANDE PITTEANUM.—This is the yellow variety of *O. grande*, in which the brown markings of the typical form are replaced

by deep yellow. The sepals are greenish yellow, barred with deeper yellow markings, the top half of the petals pale yellow, the base deep yellow. The broad lip is pure white, with some bands of yellow at the base. The plant carried a three-flowered raceme. From Mr. H. T. Pitt, Rosslyn, Stamford Hill, N.

Messrs. J. Veitch and Sons sent two small plants of *Cattleya Minerva*, each bearing a three-flowered raceme. The colours of *C. Loddigesii*, one of the parents, are most pronounced in the offspring, while the shape is more like that of *C. Bowringiana*, the other parent. Messrs. H. Low and Co., Bush Hill, Enfield, sent *Cattleya Mantini*, *C. Gaskelliana alba*, a fine form of *Lælia pumila*, an exceptionally dark variety of *Cymbidium Traceyanum* with a raceme of eight flowers, and the rare *Cypripedium Olivia* with its two parents, *C. niveum* and *C. tonsum*. Messrs. F. Sander and Co. sent six finely flowered plants of *Stenoglottis longifolia* and a plant of *Bulbophyllum grandiflorum* with three flowers and buds. Mr. J. Bradshaw, Southgate, was awarded a silver Banksian medal for a choice, but small group, in which was a fine plant and variety of *Cattleya Maroni*, the sepals and petals rich bronzy yellow, the lip yellow, suffused with purple and veined with a darker shade of purple. The side lobes are of a distinct shade of rose on a yellow ground, the base deep orange with some brown markings. *C. Mantini* had two racemes of seven flowers each. In this the sepals and petals are deep rose, of good form and substance, the lip rich crimson-purple in front, suffused and veined with yellow on the disc, the side lobes rosy purple with some indistinct yellow lines at the base. Some good forms of *C. labiata*, *Odontoglossum crispum*, and a plant carrying a three-flowered raceme of unusually large flowers of *Cycnoches chlorochilon* were also included. Mr. W. Thompson sent *Odontoglossum crispum* Queen Empress, a beautiful variety, white, with a deep rose suffusion. The plant carried a ten-flowered raceme. *O. c. Katæ* is a starry form, white, covered with numerous purple spots. Mr. H. Little sent a spike cut from the certificated plant of *Cattleya Mantini nobilior*. This is superior in every respect to the forms generally distributed under this name. The sepals and petals are larger and of an intense crimson, the lip deep crimson-purple, the disc in the centre deep orange on a brownish ground, the golden lines also most prominent. The side lobes are of the same colour as the sepals and petals, with a few whitish lines at the base. There were seven flowers on the raceme exhibited. A pretty form of *Cattleya granulosa* var. *Schofieldiana* was sent from the same collection. Mr. H. T. Pitt sent the distinct *Bulbophyllum grandiflorum*, in which the large dorsal sepal is green, suffused with brown, and spotted with white. The lower sepals are green, slightly suffused with brown, each about 3 inches in length. The pretty *Saccolabium Calceolus*, the flowers yellow, thickly covered with miniature bright reddish brown spots, came from the same collection. Mr. De B. Crawshaw sent a pretty form of *Cattleya Hardyana*, the segments being unusually light. *Lælia pumila* Lionel Crawshaw is an exceptionally large-flowered variety of the typical form. Mr. F. Hardy, Tyntesfield, Ashton-on-Mersey, sent a dark form of *Lælia Euterpe* and *Sophr. Cattleya Hardyana*, in which the sepals and petals are scarlet as in the *Sophrontis* parent, the lip also scarlet, shading to yellow through the throat.

Floral Committee.

The following received the award of merit:—

ASTER NOVI-BELGII ROBERT PARKER NANUS.—Very few indeed are there who do not know the Michaelmas Daisy Robert Parker, and the point of difference here is the exceeding dwarfness, the plant being about 18 inches high. The value is not wholly in this, for quite half of this is flowering material, for as seen it is much superior in this respect to the old form, and the colour being of the palest blue, is very pleasing and effective. From Mr. F. A. Bevan, Trent Park, Barnet (gardener, Mr. W. H. Lees).

ASTER AMELLUS DISTINCTION—This is a very good name for the most distinct break in the Amellus group we have yet seen. The typical kind is a free-seeder and the seedlings vary greatly, though a large number are not of much value. This one, however, is distinct, the light mauve blue flowers very pleasing, and the ray florets being quite flat, the variety is seen to advantage. There is a warmth of tone in this not usually seen. From Mr. F. A. Bevan.

There was a considerable falling off at this meeting compared with some previous ones, yet much useful material was in evidence. One of the most interesting was a group of flowering and fruiting shrubs, shown doubtless with a view to demonstrate the autumn character of these things, which is of course most important. Some of the more effective of this interesting group, which came from the Messrs. Veitch and Sons, Chelsea, were *Oxydendron* (Andromeda) *arborescens*, the foliage a brilliant red, and with the bunches of fruit very pretty in effect; *Caryamicrocarpa*, of golden hue; *Rhus glabra laciniata*, *Crataegus Pyracantha* *laevis*, rich with scarlet berries; *Acer japonicum microphyllum*, *A. j. laciniatum*, *Euconymus europaeus fructu-albo*, very distinct; *Koeleruteria japonica*, *Styrax japonica*, full of small almost Acorn-like flowers; one or two forms of *Cornus*, *Clerodendron trichotomum*, *Ampelopsis tricuspidata*, very pretty, and a charming lot of fruiting sprays of the best hybrid Sweet Briers. These last alone would form a pretty colony at this season by reason of their richly coloured fruits. The same firm also had a semi-circular group of *Chrysanthemums*, of which Mme. Gustave Henry, white, very broad and with finely quilled florets; Louise, pure white Japanese incurved; Little Nell, white, but a singularly flat, uninteresting kind; Emily Silsbury, pure white; Eastman Bell, crimson and gold; Mons. A. de Lucviver, golden orange, being some of the best. The group was surrounded by Ferns and backed with a few Palms. A set of the hybrid *Rhododendrons* between *javanicum* and *jasminoideum* was also shown. A silver Flora medal was awarded. Of more than passing interest was a group of Roses from Messrs. Paul and Son, Old Nurseries, Cheshunt. Here the chief interest centred in the fruiting sprays of various kinds that were set up in goodly numbers. Of these may be mentioned *Rosa pulverulenta*, *R. macrophylla*, with distinctly long and very spiny fruits; the true old York and Lancaster, *R. alba*, a very glossy fruit, usually borne in threes; *R. caroliniana* quite distinct in its red stems and small fruits; *R. pomifera*, rich crimson-maroon-coloured fruits; *R. lucida*, *R. l. Vicii*, the former having foliage of a dark coppery bronze and the latter of a red hue; *R. pimpinellifolia*, very dark crimson fruits amid miniature leaves; and *R. blanda*, of a light coral-red hue. From these it will be seen how greatly varied these things are, and if grouped thinly with this in view the plants would prove very pleasing and relieve much of the more sombre tints of the garden at such a season as the present. Some very pretty and acceptable blooms in the same group were Maman Cochet, G. Nabonnand, very lovely for so late a date; Paul Neyron, Mrs. Grant, the pretty China Mmo. G. Resal, La France, White Maman Cochet, Ma Capucine, &c. (silver Flora medal). Messrs. Hugh Low and Co. had a small group of *Statice* in flower, and Messrs. Sander and Co., St. Albans, had a batch of *Dracena Sanderiana* var. *viridis*, a green-leaved form of that well-known and useful kind. A large group of flowering and fine-foliaged plants was set up by Messrs. Wm. Cuthbush and Sons, Highgate, such things as *Erica gracilis*, *E. caffra* (white), *Aralia Veitchii*, *A. gracillima*, and *A. elegantissima* being shown in groups. *Skimmias* in fruit and the small Otaheite Orange were also noted in considerable quantity. In the centre, *Nerine Fothergilli* major was very brilliant. A good deep rose *Carnation* (Malmaison var.) was named Lady Ulric, but the blooms are very small as shown (silver Banksian medal). Mr. H. B. May, Lower Edmonton, had a very pretty mixed group, in which *Salvias* and

Bouvardias played an important part. The *Salvia* was *S. splendens grandiflora*, and very brilliant were some medium sized plants. The *Bouvardias* included such excellent kinds as *candidissima*, *alba odorata*, *Vulcan* (scarlet), and *Vreelandi*, all in compact and neat examples. Variegated *Ophiopogons* in flower, variegated *Hydrangeas*, and *Eulalias* disposed here and there were very helpful, while *Asparagus Sprengeri* and *A. plumosus* var., with small Palms, gave a background. As a groundwork to the whole some very choice and well-grown Ferns were employed (silver Banksian medal). A fine lot of early *Chrysanthemums* was that from Mr. W. Wells, Earlswood, Redhill, the flowers cut in long sensible sprays with abundance of buds affording every possible opportunity of arriving at the full worth of these things; otherwise it was a collection of kinds with no material effort at effective grouping, but rather aiming at the proper disposal of the various colours. One of the finest undoubtedly is Jules Mary, a capital crimson. Chas. Joly, deep rose-pink; Mme. Zephyr Lionnet, bronze orange; A. Beeret, chestnut-red, with gold reverse; Market White, Mme. E. Lefort, a golden-bronze of the larger pompon class; M. G. Meunier, red-amaranth; Nellie Brown, De la Guille, apricot, very free and beautiful; Edmund Duval, white; Coral Queen, and a variety of pompon kinds were also included. Mrs. Hawkins Improved is as shown a good coloured, free-growing sort. The variety possesses the growth and general freedom of Mr. G. Wermig, and is practically an improved form of this rather than of Mrs. Hawkins (silver-gilt Banksian). Messrs. Peed and Sons, Roupell Park, Norwood, had a group of evergreen and variegated shrubs intermingled with Ivies and such things. The various Ivies, both tree and climbing varieties, were numerous, and of these such as *Regneriana*, *maculata major*, *Cavendishi*, and *Silver Queen* were prominent. These with *Hollies* in variety, *Aucubas*, *Laurels*, *Osmanthus*, *Cotoneasters*, *Veronicas*, and such like made up the remainder of a group of very useful winter town plants (silver Banksian medal). Messrs. Barr and Sons, Covent Garden, had one of their usually varied exhibits of hardy things, in which *Michaelmas Daisies* were prominent. These, however, were so numerous represented that a few only must suffice. Of *levis* kinds, *Arcturus* and *Callopie* are good; of *Novae-Angliae*, J. F. Raynor is a fine red, though scarcely surpassing the old N.-A. *ruber* for effect. The pretty and frail *turbicellus*, several kinds of *cordifolius*, and *Novi-Belgii densus* were also shown. *Caryopteris mastacanthus*, in pots that revealed its worth, is a desirable plant. *Anemone japonica rubra*, *Physalis Franchetti*, *Kniphofia Pfitzeri*, *K. corallina*, *K. hybrida nana remontant*, a bright coloured and compact growing plant, were also included. *Linaria alpina*, *Anthemis Aizoon*, *Crocus speciosus*, and the pretty red and white *Cyclamen hederifolium* vars. were also noted. Mr. W. J. Empson showed an early flowering *Chrysanthemum* named Mrs. Empson. It is a pretty kind and dwarf. *Michaelmas Daisies* from Miss E. Armitage, Ridi or, Ross, Herefordshire, were in several kinds, but hardly in condition to determine their true worth. A very pale blue and another of rich deep violet-blue appeared showy, but require to be grown in comparison with good kinds. *Gypsophila paniculata elegans* is also much in the same way, but comes too late in the season for its merits to be seen. A very extensive arrangement of *Michaelmas Daisies* came from Mr. F. A. Bevan, Trent Park, New Barnet (Mr. W. H. Lees, gardener). The group extended more than half way down one side of the hall and contained many of the leading sorts. One or two are noted already in the awards, while *Maiden's Blush*, 3½ feet, rose-purple, a warm tone of colour; *Beatrice*, 4 feet, white, in good panicles; N.-B. Harpur Crewe, white; *Versicolor Themis*, 5 feet; N.-B. *densus*, 2½ feet, good blue; N.-A. *ruber*; Newry Seedling, very pale blue; *levis* *Chapmanii*; *ericoides*, the latter very beautiful; Robert Parker, 5 feet; several forms of *Amellus*;

Snowflake, very tall; *St. Brigid*, a good white, and *sibiricus*, only 1 foot high, were also shown. *A. sibiricus* may best be described as a dwarf and very late acris. Curiously enough, while much attention is apparently being devoted to the *Amellus* varieties, of which several were in this group, the true *A. bessarabicus* is now rarely seen even in large and would be representative collections of these things. It is, however, well worth growing, but too often is confused with and seedlings of *Amellus* supplied for it. A silver-gilt Flora medal was awarded this fine group.

Fruit Committee.

A first-class certificate was given to—

APPLE T. A. KNIGHT, which had previously received an award of merit. By consent of the committee the name was allowed to be changed to Charles Ross. From Mr. C. Ross, Welford Park, Newbury.

An award of merit was given to—

PEAR MARGUERITE MARILLAT.—This is not unlike *Duchesse d'Angoulême* in form. The flesh is soft and sweet, with much of the average character of *Pitmaston*. From Mr. Woodward, gardener to Mr. Roger Leigh, Barham Court, Maidstone.

A basket of eight handsome oval and rich yellow Melons came from Mr. Beswick, Walton-on-Thames. These were the result of crossing Sutton's Scarlet with a seedling. The fruits gave scarlet flesh, but with rather hard rind; flavour was fair, but generally the fruits were unripe. Asked to be seen again. Mr. H. Glover, Orwell Lodge, Wigan, sent as new an Apple that closely resembled a small Beauty of Kent. Mr. Hussey, Walton-on-Thames, sent an Apple that was like Early Julien, but of less excellence. Mr. Owen Thomas, gardener to Her Majesty, sent from the Royal Gardens, Frogmore, a quantity of fruits of *Tomato Epicure* and plants showing fruiting properties. The fruits are smallish, round, handsome and very richly coloured, but when tasted did not give satisfaction. In form the variety bears some resemblance to *Abundance*. Mr. Empson, gardener to the Honourable Mrs. Wingfield, Ampt-hill, Bedfordshire, sent Melon Beauty of Ampt-hill, with white flesh, but devoid of flavour. Mr. G. Wythes, Syon House Gardens, had two seedling Melons, rather small, but handsome. One named the Duchess had very pale scarlet flesh, the other white flesh, and named Syon Queen. Messrs. Laing and Sons, Forest Hill, sent Apple Dyke's Seedling, but it had no merit; also a medium-sized very white-skinned Pear, *Seneca*, the flesh of which was entirely devoid of flavour. Mr. Woodward sent Pears enclosed in the new cloister or celluloid protectors, but they did not meet with any special approval; generally muslin bags are preferable. Mr. Balderson, Hemel Hempstead, showed branches of *Superlative Raspberry* from summer growths fruiting freely. It was remarked that this autumn fruiting was common on this variety. Mr. C. Blick, gardener to Mr. Martin R. Smith, Hayes, Kent, sent a collection of thirty-six dishes of fruit. In this there were superb *Pitmaston*, *Uvedale's St. Germain*, *President Brouard*, *Doyenné du Comice*, *Marguerite Marillat*, *Durondeau*, *Souvenir du Congrès*, and very handsome *Burré Hardy*, *Marie Louise*, *Burré Superfin*, *Fondante d'Automne*, and *Doyenné Boussoch*. A silver-gilt Banksian medal was awarded. Mr. Woodward staged a grand collection of Apples and Pears, having some sixty dishes of the former and fifty of the latter. Not a few of the samples, whilst superb in size, showed the effects of the hailstorm which did so much injury to the fruit at Barham Court some weeks since. Of Apples, very fine were *Warner's King*, *Peasgood's Nonsuch*, *Mère de Ménage*, *Lady Henniker*, *Stone's Pippin*, *New Hawthornden*, *Tyler's Kernel*, *Cox's Orange*, *Scarlet Nonpareil*, *Calville Rouge*, *Cornish Aromatic*, *St. Edmunds Pippin*, *Ribston*, and *Washington*. Fine Pears were *Doyenné du Comice*, *Pitmaston*, *Doyenné de Merode*, *Durondeau*, *Fondante d'Automne*, *Gansel's Bergamot*,

Passe Crassane, and Emile d'Heyst. A silver-gilt Knightian medal was awarded. Mr. W. H. Lees, gardener to Mr. F. A. Bevan, New Barnet, staged a fine collection of fifty dishes of Apples and twenty of Pears. These were dressed with coloured foliage with nice effect. Finest of the Apples were Peasgood's Nonsuch, Bramley's, Warner's King, Newton Wonder, Round Winter Nonsuch, Grange's Winter Pearmain, and Cellini Pippin, whilst there were of eating varieties, good Ribston, Cox's, King, and other Pippins, Lord Burleigh, Rosemary Russet, and Fearn's Pippin. Good Pears were Doyenné du Comice, Bauré Diel, Beurré Hardy, Doyenné Boussoch, Durondeau, and Marie Louise. A silver Knightian medal was granted to this collection. Mr. J. Key Allen, Bitterne Park, Southampton, showed ten dishes of Apples, Warner's King being very fine. A bronze medal was awarded. Mr. R. W. Green, of Wisbech, had a collection of Potatoes in fifty dishes, all very clean, handsome samples. Very good were Up-to-date, Maincrop, Ring-leader, Snowdrop, Satisfaction, Reading Russet, and Beauty of Hebron (silver Knightian medal).

NATIONAL CHRYSANTHEMUM SOCIETY.

OCTOBER 10, 11, 12.

THE exhibition opened on Tuesday last at the Royal Aquarium, Westminster, was one of the best of the kind held in October. Twenty-three classes were provided for Chrysanthemums, and in the majority of cases the competition was good and the exhibits of a high order of merit. The competitive classes were supplemented by numerous displays not for competition, these latter embracing a variety of subjects, Chrysanthemums, of course, predominating. The vegetables, for prizes offered by the Banbury firm, made an exhibition in themselves. The attendance appeared to be much larger than usual.

OPEN CLASSES.

A class attracting more than ordinary interest was for a group of Chrysanthemums and fine-foliaged plants, arranged for effect in a space of 72 superficial feet. This brought out three competitors, the coveted position being secured by Mr. J. Spink, Summit Road Nursery, Walthamstow. The Chrysanthemums were represented by blooms of very high quality and in varieties of recent introduction. Each plant was on a single stem, developing one bloom only. Although arranged rather formally, this was somewhat relieved by the use of plants of *Eulalia*, &c., which would have looked better had they not been quite so prominent. Plants of *Souvenir* de Mme. F. Rosette, R. Hooper Pearson, and Mme. Couvat du Terrail were noticeable. A handsome exhibit from Mr. W. Howe, gardener to Sir Henry Tate, Bart., Park Hill, Streatham Common, S.W., secured second place. In this case, however, the display of fine foliaged plants was considerably larger than usual, the Chrysanthemums being represented by fewer plants. The free use of graceful Bamboos, *Dracenas*, *Crotons*, *Ferns*, &c., made a noble group. There were no competitors in the class for four plants, bush grown, and this is to be regretted, as there are so many excellent semi-early sorts specially adapted to this method of culture. Perhaps the prizes are not liberal enough to tempt growers. The class for twenty-four blooms of Japanese Chrysanthemums, not less than eighteen varieties and not more than two blooms of a variety, brought a very meritorious display considering the past season. Unfortunately, the best display was disqualified, the exhibitor staging only sixteen varieties. This was a very fine lot, and Mr. Gleeson is to be sympathised with that the error was not discovered earlier. First prize was consequently awarded to Mr. J. Brooks, gardener to Mr. W. J. Newman, Totteridge Park, Totteridge, Herts. This exhibit contained among others good flowers of *Pride of Madford*, a useful purple-amaranth at this season; Mme. M. Ricoud, a pleasing lilac rose; *Soleil d'Octobre*, the best of the early yellows; Mrs. G. W. Palmer, Oceana,

Mrs. J. Lewis, a splendid October white; Emily Silsbury, and Mlle. Louise Brossillon, a flower of great promise. Second honours fell to Mr. J. Fulford, gardener to Mr. F. D. Lambert, J.P., Moor Hall, Cookham, whose stand contained smaller and less even blooms, Mrs. J. Lewis, Lady Phillips, and Dorothy Seward representing the best flowers in this instance. In the class for twelve blooms Japanese, distinct, Mr. M. Gleeson, gardener to Mr. A. Von André, The Warren House Gardens, Stanmore, N.W., stood out distinctly from all others with flowers of splendid quality, M. Chenon de Leche, Mutual Friend, Henry Weeks, J. Brooks, and *Australie* being equal to those usually exhibited a month later. Mr. J. Brooks, with smaller blooms, but in a pleasing variety of colour, secured second place, *Pride of Madford*, *Werther*, *Soleil d'Octobre*, and Mrs. Barks, the buff-yellow sport from Edith Tabor, being his best flowers. For six blooms Japanese, distinct, the judges placed Mr. W. Meredith, gardener to Mr. George Wilder, Stansted Park, Emsworth, Surrey, first, his blooms being large, refined, fresh, and clean, Mrs. D. Dewar, a chaste white flower, and Mme. Philippe Rivoire, a good white, being the best. To all appearance a much better lot of blooms secured second honours for Mr. C. Payne, gardener to Mr. C. J. Whittington, Elmhurst, Bickley Park, Kent, who had an exceptionally fine lot of flowers. Mrs. Coombes, a lovely soft pink, was very fine, also Mme. Gustave Henry, General Paigue, bronzy yellow, and Mlle. L. Ricoud. Only two competitors were forthcoming in the class for six incurved blooms, first prize being awarded to Mr. R. Jones, gardener to Mr. C. A. Smith-Rylands, Barford Hill, Warwick. These were fairly good, though some were distinctly rough. Second prize went to Mr. Thomas Robinson, gardener to Mrs. Lawrence, Elksfield House, Hollingbourne, Kent. The class for six blooms Japanese, one variety only, made a welcome variation. In this case Mr. R. Gladwell, gardener to Mr. S. Smith, Wernden Hall, South Norwood, S.E., was placed first with large and handsome blooms of *Australie*, second position being secured by Mr. W. Paton, gardener to Mrs. Harmsworth, Poynter's Hall, Totteridge, Herts, this exhibitor staging large and even blooms of the true October-flowering Mme. Gustave Henry. Mr. T. L. Turk, gardener to Mr. T. Boney, Southwood House, Southwood Lane, Highgate, N., in a class for twelve bunches pompons, not less than six varieties and not more than two blooms of any one sort, was first with an excellent lot of flowers, *Vésuve*, *Osiris*, Mlle. Elise Jordan, White St. Crouts, Alice Butcher, and Miss Davis being very fine. There was only one competitor in the class for two vases of Chrysanthemums, each containing twelve blooms, with the addition of appropriate foliage. Mr. J. Brooks was awarded first prize for neatly arranged blooms of high quality pleasingly associated with *Ferns*, *Asparagus*, and autumn-tinted foliage. The vase of pompons from Mr. Turk was distinctly ahead of the others, the flowers lightly and prettily arranged. Second prize was awarded to Mr. S. Foster, gardener to Mr. R. Nevison, Tenterden Hall, Hendon, whose prettily arranged vases of *Piercy's Seedling* (bronze) and grass were somewhat unique. For six bunches pompons, Mr. A. Taylor, 5, Vernon Terrace, East Finchley, N., was second. A new class introduced this season was for twelve bunches early-flowering Chrysanthemums, in not less than six varieties, from plants grown in the open air and not disbudded. These were set up in vases, and in most cases large, handsome bunches were exhibited. The first prize was awarded to Mr. W. Paton, who had *G. Wermig*, Mme. C. Desgrange, Mme. Marie Masse, Ivy Stark, Mrs. J. R. Pitcher, *Francois Vuillemet*, *Blanche Colomb*, and *Harvest Home*. The second prize lot from Mr. Eric F. Such, nurseryman, Maidenhead, embraced many very pleasing colours. For three stands or epergnes there were four competitors. Miss Cole, The Vineyard, Feltham, Middlesex, made a charming display with three epergnes, using orange, yellow,

and crimson flowers in association with *Croton* leaves, *Ferns*, *Asparagus*, and autumn-tinted foliage, and was awarded first prize. Second honours fell to Mrs. W. Green, Jun., Harold Wood, Essex, who had rather large epergnes arranged with yellow Japanese and pompon Chrysanthemums and suitable foliage. The base of the epergnes was, however, somewhat formal and cumbersome. It is a pity that the class is not clearly defined, and the executive should see that either stands or epergnes—one or the other—should be asked for, as this has proved misleading. Six competitors entered the lists for a single vase of Chrysanthemums suitable for table decoration, the vase not to exceed 18 inches in height. Miss Easterbrook, The Briars, Fawkham, Kent, was an easy first, arranging twelve large, handsome Japanese blooms very happily with foliage of an appropriate kind. Milano, Mrs. G. W. Palmer, and Lady Byron were the three varieties used. Second prize was won by Mr. E. H. Chitty, gardener to Mr. S. Hardy, Cholmeley Lodge, Highgate. A special prize offered by Messrs. R. & G. Cuthbert, New Southgate, for three vases of the new Mrs. Wingfield, early Chrysanthemum, brought out only one competitor, this being Mr. W. Howe, who staged very handsome blooms of this variety.

AMATEUR CLASSES.

These were in most cases poorly contested. For twelve blooms Japanese, distinct, Mr. R. Gladwell was placed first out of three competitors with a nice fresh and even lot of blooms well staged. Simplicity, *Phœbus*, *Werther*, *Susie*, *Australie*, and *Louise* were his best flowers. Mr. W. Perrin, gardener to Mr. C. W. Richardson, Fairgreen House, Sawbridgeworth, Herts, was second, *Mutual Friend* and *Australie* being staged in excellent condition. In the class for six Japanese blooms, distinct, Mr. Gladwell had neat and even flowers throughout. Mr. Perrin was again second with a nice lot of flowers. In Division B, which is confined to *bona fide* amateurs, the competition was very poor. First prize was secured by Mr. W. G. Prudden Clark, York Road, Hitchin, Herts, with a fairly good stand, in which more colour was badly needed, he having too many very light varieties. Mr. Martin Silsbury, Providence, Shanklin, Isle of Wight, was second of the two competitors for twelve Japanese blooms, not less than six varieties, the whole of the blooms being somewhat rough and of poor quality.

VEGETABLES.

For prizes offered for vegetables by Mr. Henry Deverill, Banbury, Onions as usual played an important part, and although very fine, we think they were not so good as last season. For six Aristocrat Onions, Mr. W. Masterton, gardener to the Earl of Camperdown, Weston House, Shipston-on-Stour, was placed first with fairly even specimens, second prize falling to Mr. William Pope, gardener to the Earl of Carnarvon, Highclere Castle, Newbury. Of six competitors for the twelve largest Ailsa Craig or Cocoa-nut Onions, Mr. J. Bowerman, gardener to Mr. C. H. Hoare, Hackwood Park, Basingstoke, was first, having large, clean bulbs, scaling in the aggregate no less than 31½ lbs. Second prize was won by Mr. F. L. Clatworthy, gardener to Mrs. Bradshaw, Lifton Park, Devonshire, with good, though slightly smaller and less even specimens, totalling 29½ lbs. For six Ailsa Craig or Cocoa-nut Onions Mr. J. Bowerman was again first with specimens of mixed quality, weighing in the aggregate 14½ lbs. The only other competitor was awarded a fourth prize. For twelve specimens of either Anglo-Spanish, The Lord Keeper, Royal Jubilee, or Rousham Park Hero, Mr. W. Maybury, Brooke House Gardens, Ash, Dover, was first with rough and uneven bulbs, and there was a bad fourth. Mr. Bowerman again secured leading honours for six Oxonian Leeks. These were large, handsome, though rather irregular specimens, beautifully blanched. Mr. R. Lye, gardener to Mrs. Kingsmill, Sydmonth Court, Newbury, was second with smaller, but very neat and even specimens.

For twelve Intermediate Carrots Mr. J. Masterton was first with exceptionally good roots, large, clean, and highly coloured. Second prize was awarded to Mr. Pope with smaller and less even specimens of good colour. The Beets were not so good as usual, although a nice lot secured first prize for Mr. R. Lye. Mr. Pope was placed second with useful roots. Mr. Edwin Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, had a grand lot of Celery in the class for six sticks Aylesbury Prize Red; Mr. Bowerman was second with much smaller heads. Mr. Beckett was again to the fore with twelve specimens Hollow-crowned Parsnip, which for quality and finish were unsurpassed. Mr. Pope was second with good specimens, though much shorter. For twelve Glenhurst Favourite Tomatoes Mr. Beckett again led with a beautifully even lot of good colour, followed by Mr. Bowerman with much smaller fruit. For eight distinct kinds of vegetables there was a keen competition. In this class Mr. Beckett was again invincible, staging Autumn Giant Cauliflower, Parsnips, Scarlet Intermediate Carrots, Onions, Leeks, Tomatoes, Celery and Satisfaction Potatoes. Mr. Lye also showed well, being placed second. There was also a collection of vegetables open to amateurs and cottagers, first prize being secured by Mr. R. J. Horton, Tysoe, Kineton, Warwickshire, who set up a neat collection, followed by a smaller lot from Messrs. E. and H. Wells, Tysoe, Kineton, Warwickshire. For twelve Pedigree Onions there was a spirited competition, Mr. Thos. A. Beckett, Havering Park, Romford, Essex, being placed first with very neat, globular and well-ripened specimens.

MISCELLANEOUS EXHIBITS.

As usual, these contributed largely to the display made on this occasion. Mr. H. J. Jones, Rycroft Nursery, Hither Green, Lewisham, S.E., had a fine group arranged right across the centre of the building and backed by graceful Bamboos. The central group was confined to Chrysanthemums, yellow and bronze colours predominating, and at either end smaller groups, one of richly coloured Crotons and the other of Dracenas, gave a finish to the whole. Considerable taste was displayed in the disposal of the plants (gold medal). A similar award was made to Messrs. John Laing & Sons, Forest Hill, S.E., who had a superb display of 150 dishes of Apples, Pears and Nuts. Worcester Pearmain, Tom Putt, Lady Sudeley, Lane's Prince Albert, Cox's Orange Pippin, Adams' Pearmain and Peasgood's Nonsuch were a few of the good things to be seen. Messrs. S. Spooner & Sons, Hounslow Nurseries, Middlesex, also had a large table of Apples of fine quality and of a most representative character, for which a silver-gilt medal was awarded. Messrs. William Cutbush & Sons, Highgate and Barnet Nurseries, made a magnificent display of Apples, embracing all the best varieties. This exhibit was noted for its quality and the high colour of many of the individual dishes of fruit. Autumnal foliage considerably enhanced the richness of the display, for which a silver-gilt medal was awarded. A similar award was made to Mr. W. J. Godfrey, Exmouth, Devon, for a large table of Chrysanthemums, Carnations and perennial Asters. The exhibition Chrysanthemums were largely in evidence, embracing such sorts as Reginald Godfrey, Mrs. Coombes, R. Hooper Pearson, Oceana, Autumn Glory, and a new decorative sort, Ettie Mitchell, a pretty orange-bronze flower on a beautifully dwarf habit of growth. A silver-gilt medal was also awarded to Mr. S. Mortimer, Rowledge, Farnham, for a superb display of Cactus and show and fancy Dahlias. This was a remarkable exhibit so late in the season. The blooms were typical in form, while the colour in most cases was wonderfully rich. To Messrs. Dobbie and Co., Orpington and Rothesay, a similar award was made for a large table of hardy border Chrysanthemums, embracing all the new and popular sorts. The varied character of the early-flowering sorts, together with their profuse display, was noted here. This exhibit also contained a pretty lot of

blossoms of the single Cactus Dahlias. Messrs. H. Cannell and Sons, Swanley, Kent, were again to the fore with a bright and attractive group of Cannas. These were admirably arranged with a fine background of Palms, &c., and a pretty edging of Ferns (silver-gilt medal). Messrs. Thos. S. Ware, Ltd., Tottenham, secured a silver medal for a grand display of Cactus Dahlias. A similar award was made to Mr. W. J. Prewett, gardener to Mr. Arthur Pearson, Frensham Place, Farnham, Surrey, for a beautiful display of Apples, Pears, and other fruits. This was a highly meritorious exhibit. A small silver medal was awarded to Mr. Henry Deverill, Banbury, for a grand bank of early Chrysanthemums, perennial Asters, &c. Aster Amellus Riverslea and A. A. Stella were much in evidence. Mr. E. Such, Maidenhead, had a similar group of cut flowers prettily set up (silver medal). A bronze medal was awarded to Miss Easterbrook, Fawkhams, Kent, for a superbly arranged hand-basket of Michaelmas Daisies. Mr. T. Williams, Ealing, was highly commended for his rustic table decorations, using in this instance Michaelmas Daisies and early-flowering Chrysanthemums.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE thirteenth annual dinner of this flourishing society was held on Thursday evening, the 5th inst., at the Holborn Restaurant, Mr. W. Y. Baker, of the Thames Bank Iron Company, presiding. A goodly number of friends and members sat down, and a very enjoyable evening was spent. Among those present we noticed Messrs. J. H. Veitch, G. Bunyard, W. Iceton, H. B. May, P. Kay, G. Ingram, J. Hudson, and others.

After the usual loyal toasts had been duly honoured, the chairman, in proposing "Success to the United Horticultural Benefit and Provident Society," called attention to the many benefits the members enjoyed, one being that the society was a savings' bank as well as a benefit society. He found on referring to the books that the number of members was 890, and of that number only three were now in the receipt of sick pay. Mr. Baker urged the claims of the convalescent fund, which was started some years ago in order to allow members who have been ill to go away for a change. To such the sum of 10s. weekly is allowed for three weeks in addition to their sick pay. We think that this fund might be more taken advantage of. Mr. Baker coupled with the toast the name of Mr. J. Hudson, the treasurer, who in the course of his remarks stated that the handsome sum of £15,000 was now invested. The annual dinner, he said, was held in order to popularise the society, and he hoped that in a year or two the members would number 1000. He also on behalf of the society thanked the Press for the interest they had taken in the society. In referring to the honorary members he said that 96 per cent. of the receipts came from the members, the remaining 4 per cent. coming from honorary members.

Mr. Thomas Winter proposed "The Honorary Members," and made a special appeal for funds to the convalescent fund. Mr. Bunyard, in responding to this toast, thought that the list of honorary members should be doubled, and suggested that nurserymen should call attention to the society in their catalogues. "The Craft" was proposed by Mr. R. Dean in an excellent speech, this being responded to by Mr. Wright, of the Royal Horticultural Society's Gardens, Chiswick, who said that at the present time there was a great want of good fruit growers, he having failed to find men in no less than thirty cases. Mr. Iceton, in a few well-chosen words, proposed "The Chairman." The following contributions were received during the evening: W. Y. Baker, £15 15s.; W. Iceton, £2 2s.; B. Maller and Sons, £1 1s.; N. N. Sherwood, £5 5s.; P. Kay, £3 3s.; J. Veitch and Sons, £3 3s.; Thames Bank Iron Co. (employés) £1 1s.; J. Laing and Sons, £2 2s.; W. Marshall, £1 1s.; A. Watkins, £1 1s.; Messrs. Dickson, Chester, £2 2s.; R. Dean, 10s. 6d.; S. T. Wright, 10s.;

T. N. Cox, £1 1s.; G. Monro, £1 1s.; J. George, 10s. 6d.; Willingham Bros., Pine-apple Nurseries, £1 1s., making a total of £42 10s.

The musical arrangements were under the direction of Mr. Herbert Schartau, and the tables were decorated with flower and fruit kindly sent by Messrs. Cannell and Sons, H. B. May, W. Thomson and Sons, Clovenfords, J. Veitch and Sons and others.

OBITUARY.

MR. JOHN WOOD.

ON September 24, Mr. John Wood, of Kirkstall, Leeds, died after an illness of a few hours, aged fifty-seven years. To all readers of THE GARDEN his "Notes on Hardy Plants" were well known, and others than the writer would probably confess to a habit of first looking for this column. These communications not only introduced to amateurs new species suited to their collections of alpine plants, but gave valuable cultural information. He had nearly reached middle life before he took up the culture of hardy plants, which he carried on with much success. Mr. Wood's advice and influence will be missed in many gardens that will still retain the memorials of his past work.

R. R.

Chrysanthemums in the parks.—We are asked to state that the annual show of Chrysanthemums at Southwark Park is now open, and that the houses at the Council's other parks will be ready for opening on the following dates: Finsbury Park, October 12; Victoria Park and Waterlow Park, October 14; and Battersea Park, October 25.

Pruning the Horse Chestnut.—With great interest I read the article on the Horse Chestnut by "J. S." in THE GARDEN of July 8, but he does not say anything about pruning old specimens. Here, with the same climate as the north of England, there are thousands of beautiful old Chestnuts round the town, but rather too thickly planted. To prevent them getting bad, many gardeners advise cutting them back. Others are of quite a different opinion, as they say the young shoots would then get frozen and the trees would never again be effective.—GUSTAVUS POL, Head Gardener, Botanic Gardens, Cracow, Austria.

Lapageria rosea and L. alba.—I planted one red and one white Lapageria in a conservatory last year, same aspect, the wall looking north. The red variety is doing well and flowering abundantly, but the white one has only produced six flowers and does not flourish. I am told that it has a habit of dying away. Can anything be done to prevent this?—SHERBORNE.

*** Possibly there may be something wrong with the drainage as regards the white variety. We have grown both forms in exactly the same position and under identical conditions, and found that on the whole the white variety was always the more vigorous and flowered more freely than the red one. It may have been a weaker plant at the start.—ED.

BOOKS RECEIVED.

"The Student's Flora of New Zealand." By T. Kirk, F.L.S. Eyre and Spottiswoode, Fleet Street, E.C.

"Annual Report of the Department of Parks." Boston. 1898.

Names of fruit.—H. Parker.—Quite impossible to name from such a poor specimen.—Richmond. —Pears: Dark, Beurre Clairgeau; green, Louise Bonne of Jersey; Apple Lord Suffield.

Names of plants.—Mrs. Blackwell.—The Poison Ivy (Rhus Toxicodendron).—Alice Wilson.—1, please send better specimen; 2, Leycesteria formosa; 3, looks like an Ash, but should like to see better specimen.—Whatcombe.—Thymelæa ligustrina (S. Europe).—S. H.—Rhamnus Frangula (the Alder Buckthorn).—A. K. Gale.—1, Euonymus latifolius (the Broad-leaved Spindle Tree); 2, Crataegus coccinea.—Subscriber.—Torreya californica (the so-called Californian Nutmeg). It is a rather uncommon plant in gardens. The fruit is of no value that we know of, but it is not injurious.—Glaucus.—A, Fuchsia Riccartoni; B, Fuchsia gracilis.

THE GARDEN.

No. 1457.—VOL. LVI.]

[OCTOBER 21, 1899.]

INDEX.

(Illustrations in *Italics*.)

Orchard and Fruit:—

Apple Bismarck	312
Apple Hawthornden	313
Apple Tyler's Kernel	311
Apples, dessert, at the Crystal Palace	313
Apples, shapely	313
Cherry Late Duke	312
Currants on north walls	312
Damsons and Bullaces	312
Episod, en	312
Figs, open-air, in Wales	312
Fruit, exhibiting	313
Logan Berry, the, for preserving	313
Oidium in Vines, a cure for	312
Peach Sea Eagle	312
Peach Violette Hative	313
Pear Clapp's Favourite	312
Pear Marie Louise	312
Pear Pitmaston	314
Pear Triomphe de Vienne	313
Strawberry Fillbasket	312
Plum Pond's Seedling	312
Seaweed for fruit borders	311
Strawberry Latest of All	313
Strawberry St. Joseph	313

Orchids:—

Calanthe Veitchi, feeding	311
Cattleya bicolor	314
Cattleya labiata autumnalis	314
Cypripedium Charlesworthii	311
Dendrobium nobile	311
Epidendrum Wallisi	314
Masdevallia Davisii	314

Miltonia Clowesi	314
Thunias, resting	314

Flower:—

Castor-oil plants	315
Daffodils	315
Dahlia (Cactus) Ethel	317
Dahlias at the Westminster Aquarium	317
Dahlias, new Cactus	316
Dahlias, pompon	317
Helium nudiflorum	317
Hollyhock, the, in Regent's Park	315
Hollyhocks, group of single, in Regent's Park	315
Lavenders, Sea	316
Liatris pycnostachya	315
Lilium rubellum	316
Pentstemonus	315
Tulips, May-flowering	316

Roses:—

Brier, Sweet, Meg Merrilies	317
Rosa moschata	317
Rosa moschata	317
Rosa Pissardi	317
Rosa sericea	317
Rose Alfred Colomb	318
Rose Augustine Guinoisseau	318
Rose Daisy	313
Rose General Jacqueminot	318
planted out under glass	318
Rose Gloire des Rosomanes	318
Rose Mme. Lamhard	318

Roses, climbing and pillar, thinning out	318
Roses on own roots	318
Roses, planting	318

Kitchen:—

Beans, climbing Butter	320
Cabbages, Savoy	320
Carrot Matchless Scarlet	320
Carrots, French	320
Onion Cranston's Excelior	320
Oxalis crenata	320
Peas and drought	320
Potato British Queen	320
Potatoes, field	319
Potatoes, coal ashes for	320
Things, some, better omitted	320
Vegetable Marrows	320

Garden Flora:—

Poppy, a garden hybrid	320
------------------------------	-----

Week's Work:—

Fruits, outdoor, work among	321
Kitchen garden, work in the	321

Chrysanthemums:—

Chrysanthemum Miss Alice	323
Byron	323
Chrysanthemum Mrs. Hawkins	323
Chrysanthemum Soleil d'Octobre	323
Chrysanthemums, early-flowering	322
Chrysanthemums, fed & unfed	323

Chrysanthemums in Peach houses	323
--------------------------------------	-----

Destroyers:—

Wasps	323
-------------	-----

Stove and Greenhouse:—

Amasonia punicea	325
Carnation Reginald Godfrey	324
Carnations, rust on	324
Curcuma Roseana	324
Hibiscus Manihot	324
Lily, the Scarborough	325
Lindenia rivalis	324
Lindenia rivida	324
Rhododendron retusum	325
Room plants, choice	324
Solomon's Seal, forcing	324
Valloia purpurea	325
Viburnum, forcing our native	325

Trees and Shrubs:—

Caryopteris mastacanthus	326
Hibiscus celestis	326
Majorca, old Olive trees at	326
Olive trees, old, in Majorca	326
Vitis inconstans	326

Books:—

"More Pot Pourri"	327
"Vegetables for Exhibition and Home Supplies"	328

Notes of the Week:—

Acemone blanda	329
Acemone japonica elegans	329
Aster N.-B. densus	328
Aster N.-B. laevigatus	328

Caryopteris mastacanthus	329
Cassia corymbosa	329
Crocus, autumn, in grass	328
Crocus cancellatus	329
Eucomis pucata	329
Helianthemum amabile fl. pl.	329
Nepenthes at Kew	329
Physalis Franchetti	328
Rhus Toxicodendron radicans	329
Solanum meloagena	328
Stenoglossis longifolia	329
Sternbergia lutea	330
Water Lilies, tropical, in the open air	329
Wistaria, fruiting of the	328

Societies:—

Royal Horticultural	330
---------------------------	-----

Public Gardens:—

Metropolitan Public Gardens Association	330
---	-----

Miscellaneous:—

Carnation Mrs. G. Foster	330
Flower gardening, grotesque	330
Nicotiana sylvestris	321
Peat moss litter	325
Plants, improving, by selection	319
Toad, the	318
Weather in W. Herts	318
Winter, prospects for	325
Zephyranthes, white-flowered	323

ORCHARD AND FRUIT GARDEN.

SEAWEED FOR FRUIT BORDERS.

SEAWEED for various garden crops is seldom used so freely as it might be, especially by those whose gardens are situated near to the coast. Many, no doubt, in the midlands would be only too pleased to lay in a store for Asparagus and Seakale plantations, but the distance entails too much outlay for seaweed to be used generally for such purposes, while others who can obtain large quantities for the mere cost of carting appear to ignore its value. What I wish to point out, however, is that seaweed can be put to other and very valuable purposes besides that mentioned above, viz., as a mulch for fruit trees. Those who have not tried seaweed in their orchards and fruit gardens would be surprised at the beneficial effect it has on the trees, especially Apples and Pears, when, of course, it is used with care and moderation. This is particularly the case during dry seasons such as the past three. My first impression—and it was not a slight one—was gained at Bembridge, Isle of Wight, last August on land recently reclaimed from the sea. The site no doubt is well known to many of the readers of THE GARDEN, but perhaps it is only a few who have visited that portion in the occupation of Mr. C. Orchard, who has converted it into a fruit, flower, and vegetable garden. The great depth of sandy soil is undoubtedly to a great extent composed of thoroughly decayed seaweed and sand, and the way all vegetation appears to thrive in it is marvellous, more noticeable perhaps to such as myself, whose crops the last two summers were collapsing from the want of moisture in spite of the mulchings of stable litter freely applied. It occurred to me then that for light soils and for use during a very dry season seaweed would undoubtedly prove more valuable as a mulch than any other material generally used for the purpose. Apart from any manurial properties it contains, it is, like salt, moisture-holding as

well as feeding, the value and importance of which should not be ignored by those whose fruit trees are growing in too porous soils and where the rainfall is light. I certainly never saw more healthy trees or better samples of Apples, though, of course, the climate and situation are also very favourable for their production. I should not be in favour of burying fresh seaweed near to the roots of established trees, or incorporating it with the soil in forming a new orchard or fruit garden, but frequent mulchings of the surface ground piecemeal are, I am sure, a safe means of stimulating growth and sustaining the trees under the trying influence of a long drought. By this means it would gradually find its way into the lower ground and undoubtedly improve its staple.

These views were further strengthened when recently visiting the gardens at Arundel Castle. In these gardens the outdoor culture both of Peaches and Nectarines is gone in for largely, the grand walls and mild climate proving very favourable to their well-doing. Some of the borders are on rather sharp slopes, causing rain to run off freely and the work of watering thoroughly somewhat difficult. For many years Mr. Burbury resorted to heavy mulchings of stable litter, not only round the trees themselves, but also all over the borders, which are usually cropped with something dwarf, such as French Beans, &c. The effect of this was that it not only formed a harbour for sparrows and other birds, but, what was worse, woodlice, earwigs, weevils, and beetles found it a safe lurking place by day, while they made the softening fruit of Peaches and Nectarines on the walls their feeding ground at night. Many fine fruits were therefore entirely spoilt before they were ripe, and had to be used in the kitchen. No finer fruit could possibly be seen than on these walls this autumn, large, bright, and without a speck, and, what is more, each fruit ripened perfectly without any damage by the pests named above. The reason for this very satisfactory result is not far to

seek, a happy thought occurring to Mr. Burbury to use seaweed in the place of stable manure for mulching. Further comment on this point is perhaps needless unless it be to urge others to follow his example, as I certainly intend doing myself in future. So far I have proved that the use of seaweed is valuable in the cultivation of the different trees named above; that being so, could it not also be employed with equal good results with Vines? Many Vine borders have to be formed with soil far too light in composition to suit the requirements of the occupants, in which case an occasional dressing of seaweed might be used with advantage, proving better than repeated mulchings of stable manure. There are other borders which, owing to the too free use of manure, have become sick of such dressings, causing the soil to become sour or uncongenial to proper root-action. A change then is certainly advisable in such cases, and I know of nothing more calculated to restore it to a sweet, healthy condition again than applying a dressing of lime with a mulching afterwards of seaweed. Seaweed, however, varies considerably, some being far too coarse and heavy for the different purposes mentioned above, unless it has first had sufficient time for partial decomposition. Preference is given to that of a finer and lighter character, which when collected generally contains a fair amount of sand, making it more suitable in every way for use in the garden, let it be for Asparagus beds, fruit borders, or even as a plunging material for pot plants during the summer months.

RICHARD PARKER.

Goodwood.

Apple Tyler's Kernel.—This handsome Apple is not sufficiently known. It keeps well, I believe, until quite late in the season, is of very fine form and good colour, added to which its shape prevents waste. My tree of it has not yet fruited, but I have seen it in neighbouring collections, and this induced me to plant it. The fruit is bright red on the side next the sun, and it has a shining appearance that should render it a valuable kind. About its flavour for eating I

cannot say, but it is a very free-bearer and a good cooking Apple.—H.

Plum Pond's Seedling.—As a kitchen Plum this fine variety is hard to beat, but I do not think it is so well grown as formerly. There were a few dishes of it at the Palace, notably one in Mr. McLodoe's collection that was characteristic and good, but the majority were very poor for the variety. Possibly the lateness of the date was to blame in some cases, but I have had it in the south in first-rate condition at the end of September. The constantly growing plague of birds is all against good late fruit.—H.

Pear Marie Louise.—This popular Pear more than any other I know gives fruit of good quality under poor conditions of culture. Quite recently I saw some really fine specimens growing on an old and neglected tree that one would imagine would not produce a good fruit. But this is no excuse for neglecting it, for though it may be long-suffering, there can be no comparison between these and fruit from really well-cultivated trees. On the other hand, I have known many cases where Marie Louise with the best of care refused to thrive well, and this on soils where other Pears did so. The roots must be kept near the surface if possible and frequently mulched.—GROWER.

Peach Sea Eagle.—I am inclined to place Sea Eagle at the top of the list for cropping, quality and usefulness among the late varieties of Peaches. I rarely miss having good fruits of the above variety and of the best quality. I am aware in colder districts my high opinion of this Peach may not be shared by many, as fruits differ so much in various soils and localities. My soil being thin and light on gravel is, of course, much warmer than heavy land. I do not think that Sea Eagle can be classed as a bad grower, as I have it on a north wall and it makes a free growth if the wood is kept thin. It also bears well, and the fruits are not much later than on a warmer aspect. Its free cropping should make it a great favourite in all gardens where late Peaches are required.—G. W. S.

Strawberry Fillbasket.—Fillbasket with me promises well, being robust and bearing freely, and, what is better, the fruit is of excellent quality. It is a first-class variety to follow Royal Sovereign, and, like it, it sets quite as freely and appears to be at home in most soils. Its parents are Royal Sovereign and Latest of All. It has the cropping qualities of Royal Sovereign with the Pine-like flavour of Latest of All. Fillbasket, though not so free a grower as some, is very prolific, and will give large quantities of fruit from a small area. In soils where Strawberries are not always a success I do not think anyone need fear planting Fillbasket. It does not become quickly infested with insect pests, having thick leathery foliage. I have not yet grown it in pots, but should think it will be valuable for forcing for late spring supplies.—G. W.

Apple Bismarck.—This Apple has now been a sufficiently long time in our gardens to prove it, and there can be no doubt as to its popularity. I have seen it doing well in diverse soils and situations. It certainly is a valuable introduction, not only for its size, colour and shape, but its free cropping qualities, as young trees bear so freely. Few varieties grown in bush form are so handsome. This year Bismarck is one of my best croppers, though the trees are young, the soil thin and the season a most unfavourable one, owing to the drought. The trees of this variety need less pruning than some kinds, as doubtless their free-cropping prevents a gross growth. This is a great gain in small gardens, as this variety can be grown close to walks. It fruits freely in any form, bush or standard, and answers admirably grown as a cordon.—G.

Cherry Late Duke.—Few fruits are more in demand than late Cherries, and the Duke section furnishes some of the best dessert fruits. Late Duke is one of the best late kinds I have grown, and though it is less sweet than some kinds if it is gathered early, it is rich and good if allowed to

hang well into August. I have gathered fruits in September. The fruits are valuable on account of their size and beautiful black colour. Of course as regards season, a great deal depends upon the aspect the trees are grown in. In the north this variety succeeds grandly on a west wall, and I have recently planted it on a high north wall. Grown thus, should the Morellos fail, it will be valuable for bottling gathered late in July. This variety if allowed to hang does not shrivel so soon as most of the dessert kinds, and it takes on a much darker colour as it ripens. It bears and grows freely.—G. W.

An effective cure for oidium in Vines.—We learn from the *Revue Horticole* that M. Uchet, a Vine grower of Chapareillau (Isère), belongs the credit of an important discovery, namely, the cure of oidium in Vines by substituting carburate of calcium for the sulphur treatment, which he has found ineffectual after repeated applications. The carburate was reduced to a fine powder and then sprayed upon a Vine trellis 220 yards in length after this had been well syringed with pure water. The immediate effect of the carburate on the water was the formation of acetylene gas, the effervescence from which rid the Vine of the oidium in a single operation. Neither burn nor check to growth was found to result, and eight days afterwards, convinced of the efficacy of his discovery, M. Uchet applied it to his other Vines with great success.—*La Semaine Horticole*.

AN EPISODE.

It was in the troublous and anxious times of the Royal Horticultural Society that Mr. John Lee—that good and amiable English gentleman whom we have not so long lost, but regret—was sitting as chairman of the fruit committee. Included amongst them was the writer of this paper. It is a long time ago, but I well remember it as about the beginning of the hankering after the marvellous. It gained for me an ill-will which has stuck, and it came about in this way: At a meeting at South Kensington I gave the only adverse vote to a display of large fruit, even for those days. In my opinion the fruit was too large—vulgar, if you will—to be encouraged by the Royal Horticultural Society as a paragon for dessert upon an *élite* table for quality. Mr. William Earley, who I am glad to find is still in the land of the living, sat next to me at the committee table and expressed himself very strongly against my judgment. I suppose I must have kicked too often in this way, for I found no place upon the committee at the next election of members. Nevertheless, it did not prevent me keeping in evidence against the big things overruling when entered for prizes at South Kensington or elsewhere even to this year of grace 1899. You may therefore surmise how glad I was to read the end of your critical paragraph on p. 287, issue of the 7th inst. I will add, not merely for Apples, but for all other produce entered for prize-money at exhibitions. You are, too, in good company. I did not make a note of the date, but in an after-dinner speech made by the Rev. Mr. Wilks at a horticultural club dinner not very long since, he strongly commented against this preponderating influence of size. I have, too, more recently seen the subject cropping up in the pages of THE GARDEN, and I hope it will continue to go on to assist in forcing a wedge into this big-block-produce—'e'en to the splittin' o't—to allow prizes to be given on one side for medium-sized quality for the majority, and on the other for bulk for the mere minority. I consider Apples and Potatoes to come under the same category of importance in regard to our national food, the latter taking a place only next to wheat. A few years ago when I was assorting a batch of seedlings, our

squire, Major Thoys, happened to call to consult with me about some parish business. He expressed his astonishment at the size of one variety—tubers as large as a child's head and handsome withal. He remarked: "I suppose those are for seed." "No, Major," I answered, "they are to be boiled for the pigs: exterminated, as being delusive, non-sustaining watery matter." I do not intend to produce from my present or future—I have some valuable experiments now under weigh—hybridising work larger Potatoes than I have already put into commerce. The huge kinds so popular at present I consider are positively doing harm in regard to our food. In flowers, size with beauty for exhibition may be praiseworthy and can do no harm, but there is no high art, or at least public benefit, in creating by crossing large to produce larger, and by consequence inferior sustenance by merely considering a quick filling of the measure, or in fine appearance, to satisfy a grasping for prize-money. Agricultural shows have gained a march upon us by the extinguishing of those mountainous cattle with which they erst used to astonish the natives. However, if the monstrous must continue for horticulture, let quality and quantity contend in their separate spheres.

Sulhamstead.

ROBT. FENN.

Pear Clapp's Favourite.—This is an excellent early Pear when taken at the right time, and I was surprised to see how sparsely it was represented at the Crystal Palace fruit show. Only a few dishes of it were noted in the county classes, where it should certainly have carried more weight than varieties wanting another two months before they will be fit to eat or over-ripe samples of very early kinds. It should be left on the trees until almost fit for use, but when the samples are fairly well coloured birds soon find them out and they must be gathered. Then, of course, they need a little longer time in the fruit room.—H.

Damsons and Bullaces.—Although many of the varieties of Damsons growing in a half-wild state about the hedges in different parts of the country are very inferior, yet their value to cottagers and others in a year of scarcity is unquestioned. To-day I saw two trees growing side by side—one the common white Bullace, and the other a very poor kind of Damson—and both were laden with fruit which is very useful now and right up to the end of October. The Bullace especially is improved by being exposed to a few sharp frosts. There is no doubt that these common fruits would be greatly improved if given a little attention and planted in good soil. Even as they are they are profitable, and they may with advantage be planted in hedge-rows and on waste land, which is plentiful on most estates.—H.

Open-air Figs in Wales.—One of the places that have come under my notice where outdoor Figs flourish is Tredegar Park in Monmouthshire. In the gardens there there are old walls, against which Figs have been growing probably ever since the walls were erected, and rarely do they fail to carry heavy crops of fruit. One side of the gardener's house is clothed with a spreading Fig tree, whose only rooting medium is the soil under a hard gravelled yard. In my opinion the success of Fig culture, so far as pruning is concerned, depends on persistent summer pinching, nipping back the young growths when they have made a few leaves, and again as fresh shoots form. By following this practice, long sappy shoots with leaves and buds thinly dispersed are prevented.—H. H.

Currants on north walls.—Just before planting begins, a reminder as to the usefulness of Currants on north walls may not be out of place. I prefer cordons—double or single—as grown thus the trees, if kept closely spurred in, are both ornamental and useful, and grown in

this way space is more quickly filled. It is surprising how quickly the trees grow if such kinds as Reine Victoria, Raby Castle, La Versailles, and the white variety of the last-named with the White Dutch Cut-leaved are planted. It is important to keep the trees clear of insect pests just as the fruit is colouring, green and black fly being troublesome. Syringing with soapy water, or, what is better, quassia about twice will clear the pest. There is no difficulty in protecting the trees grown thus. The fruit will keep sound for months after that on the bushes is over.—S. H. B.

The Logan Berry for preserving.—In many gardens there has been a short crop of Strawberries—at least, in the southern parts of the country. Owing to various causes, both the Strawberry and Raspberry crops were much under the average. The new Logan Berry has borne exceedingly well. Not yet being well known, I am induced to send you a note as regards its good qualities for preserving. It is less sweet than the Raspberry or Strawberry, which is an advantage and will be appreciated. The fruits are borne in clusters, darker in colour than the Raspberry, and somewhat sharp when nearly ripe, but if allowed to hang and become black they are sweet and useful for dessert. I think their value is greater for preserving, as they may be gathered less ripe and are of a delicious flavour. I find the Logan Berry fruits grandly grown on an east or north wall and treated much like the Raspberry. The plant is a strong grower, soon fruits after planting, and is not at all particular as to soil or position.—G. WYTHES.

EXHIBITING FRUIT.

I AM obliged to "W. S." (page 272) for his practical and kindly critique of my note on this subject, but am sorry he considers it impracticable to make our fruit exhibitions a little more tasteful. "W. S." says he is afraid I am not a fruit exhibitor, but in this he has not guessed correctly. Not only have I been successful with fruit collections during the present season, but in one case was placed first in a strong local competition with a collection arranged something in the manner set forth in my note, though through lack of space I had not full scope to carry it out well. In another case the schedule asked for six varieties of fruit in a basket. Now most people will, I think, agree with me that half a dozen kinds crowded into a basket are about the most unsightly class of any, and though I had perforce to follow the schedule, I cast about for some way of making the basket attractive. I chose a large plant hamper about 4 feet across and very shallow. The rim was covered first with moss and all the centre filled up with the same material. All the fruit was carried as usual—the Grapes on boards, and Peaches, Nectarines and others packed in shallow boxes. The Grapes were taken off the boards and tied at the top of the basket to the rim, the moss being kept high there in order to show the full length of the bunches. A couple of Melons filled the centre of the basket and the rest of the fruit was disposed around these upon the moss. Sprigs of Bryony and trailing pieces of Ampelopsis finished off the arrangement. Everything was prepared at home, and the staging took perhaps half an hour, so the waste (?) of time is not extravagant by any means. As to the schedule difficulty, this should be very slight. Arranging for effect half a dozen or a dozen distinct varieties of fruit upon a space of so many square feet is not difficult to understand, yet it would be amply sufficient, for naturally the judges would, in case of a close competition, give points to quality of each dish represented and the arrangement as a whole. No "uniform result," as "W. S." puts it, is needed. We have far too much uniformity in shows, and if any exhibitor by an original departure gets ahead of his fellows, all the better for him. They will copy his methods next season without a doubt, and only the disappointed exhibitors will find any fault. Take for instance the grand groups of flowering plants that were put up at the show "W. S."

mentions. Originality in conception has led by degrees from the flat sloping banks of flowers of former days to the graceful and effective displays we now see. That there is not the same scope in fruit showing goes without saying, but there is ample room for improvement. As to the unpreparedness of show officials, that is another story, but one that badly needs correcting. Many a time have I had good fruit and other produce shifted from pillar to post by committee men and others totally ignorant of the trouble involved in its production, or the great risk of injury when it is pulled about. I am glad to see "W. S." calling attention to it, for it is a great evil, especially at local shows.

H.

Peach Violette Hative.—Again this grand Peach has finished a remarkably heavy crop of fine, good quality fruit. The flavour is sweet and good, the growth of the tree free enough for all purposes, and it is undoubtedly one of the most, if not the most, generally useful in cultivation. Always grow Violette Hative Peach was the advice of a famous fruit grower when I left him some years ago, and I have never regretted doing so.—H. R.

Apple Hawthornden.—This is a useful kind well known and much grown in many parts, but in others it is seldom seen. The large juicy fruits are excellent for cooking, and many people like them for eating, while they keep much better than the Codlin types that ripen at the same time. It is one of the best kinds for restricted culture on walls or espaliers, its growth not being over-luxuriant, but it fruits much better on bush trees where the small fruit-spurs can form along the young growth. It is also one of the prettiest kinds when in flower, and is worth planting for this alone in shrubberies.—H. R.

Strawberry Latest of All.—I was somewhat surprised to find a writer who has been some time out of gardening decrying Latest of All Strawberry as a late variety. Few other Strawberry growers will share in that *ex parte* opinion. I will aver that ninety gardeners out of every hundred who have grown it will say that Latest of All is one of the most valuable late varieties in cultivation. But no doubt it has, like all other varieties, its tastes for soils, and it does best on a retentive loam or clay. It may not be a British Queen in flavour, although much like it in appearance, but at least it will give a peck of fruit to every fruit given by the Queen, and later. Elton Pine is a good late variety where it does well, but that it does not do well everywhere is evidenced by the fact that it is now seldom grown.—A. D.

Shapely Apples.—Although there were a number of instances to the contrary, I thought that as a general rule the Apples at the Crystal Palace this year were not so large, but much more shapely than last year; more characteristic of the individual kinds. The value of the rule as to polishing the fruit was apparent, some of the dishes looking as though they had only just been gathered from the trees, the bloom being perfect. One or two of the nurserymen's collections were polished, but these presumably do not come under the society's rules. But as a whole there was much improvement. There were several dishes of Peasgood's Nonsuch and Bramley's Seedling last year that were very heavy, but the deep eyes and prominent ribs, which are certainly not characteristic of good Peasgood's at any rate, detracted greatly from their value, and the more regularly shaped specimens of this season are far better.—C. H. S.

Strawberry St. Joseph.—This new variety promises well for autumn supplies, and the flavour is really good when the plants have a good root-run and are well supplied with moisture. It fruits more freely if given a holding soil. As the runners that give the later crop are made whilst the plants are fruiting, it is essential to give them liberal culture. The fruits are not large, but they are produced freely, so that what is lost in size is made up in quantity, and they are well coloured, the flesh being bright red and sweet.

This new Strawberry is a welcome addition to our list, as it can be relied upon for autumn fruiting. There is another mode of culture to get late fruits, and doubtless this will become popular—that is, potting up late-formed runners into small pots. These placed in cold frames near the glass will give fruit in October, and as they take up so little space they may be stood on shelves later on if needed for any special purpose, and will force freely if well rooted before placing in heat. It is surprising what quantities of fruit small plants will furnish.—G. W. S.

DESSERT APPLES AT THE CRYSTAL PALACE.

GENERALLY I am in entire sympathy with the criticisms in your recent report on the single dish dessert Apple classes at the Crystal Palace, especially in relation to the scanty number of prizes offered in classes for varieties that are popular, widely grown, and of the very best description. But I fear there has been in the arrangement of the schedule a certain description of reasoning as thus: These fine varieties, Blenheim, Ribston, King, Cox's, Sturmer, and a few other Pippins are universally in cultivation, and the object should be the leading to a demand for other varieties that are newer and may be but little in cultivation, thus leading to trade. On no other basis is it possible to assume that varieties, as presented at the Palace comparatively worthless, could have had the same encouragement pecuniarily offered them, only one or two dishes, and those poor, being shown, whilst of the old popular varieties twenty dishes or more were shown, many of the samples really first-rate. I fear, so far as another show is concerned, suggestions made may have little weight as against trade requirements, but I should like to see at least six prizes offered in all those classes that in all years bring many dishes. Then, in relation to the awards made in the Blenheim Pippin class, when I pointed out that certain very beautiful medium-sized samples had been passed over—samples that exactly represented the average size and character of this fine Apple—I was met with the reply that the conditions of the schedule had been strictly adhered to. That was so, and therefore no fault lies with the judges, but with the improper conditions imposed upon them, and which they too rigidly interpreted. Really it was odd to find that, no such conditions being imposed on but one other variety, even Cox's, Ribston, Gravenstein, King of Tomkins County, and some others had larger fruits selected for the prizes than were those of so relatively large an Apple as Blenheim Pippin. Clearly, if any variety is placed in the dessert list, fruits that are the handsomest, most even, and most representative of the variety should be allowed to win. Admittedly, Blenheim Pippin may be a large-fruited variety generally, but does it for one moment compare in size amongst Apples with Pitmaston amongst Pears? Yet with this huge Pear no limitation is imposed on size of fruits shown. The fruits shown were all large, and, as your report says of Souvenir du Congrès, the fruits awarded prizes were of enormous size. I am not for one instant assuming that size is a merit in dessert fruits or that quality and size go together, but a large Blenheim Pippin is always as good eating as is a small one. But consistency should prevail in all the dessert classes. A. D.

NOTES AND QUESTIONS.—FRUIT.

Pear Triomphe de Vienne.—I note an award of merit has been given to Pear Triomphe de Vienne. Is it usual to give this award to an old Pear? I have

grown it since 1884, and then it was not a new Pear. Can you give me the names of Apples which bloom late. They escape the frost, and what to me is of more consequence, the buds are not so frequently destroyed by birds.—GEORGE MAY, *Reading*.

Pear Pitmaston.—A. Ward, in giving a description of this Pear in a recent number of THE GARDEN, mentions that if not overcropped the fruit will average half a pound in weight. I picked from one tree on a south wall on October 6 eighty-four fruits, which averaged a trifle over 1½ lbs., and from another tree I gathered twenty fruits, which weighed 36 lbs.; the largest of these weighed 2 lbs. 2 ozs., and the smallest 1 lb. 10 ozs. In 1896 I gathered some which turned the scale at 3 lbs. During the long spell of drought I gave the trees frequent waterings, which no doubt helped the fruit to get to such perfection. I find that for an October Pear there are few that will equal it for dessert.—C. M., *Guernsey*.

—This well-known Pear is of much better quality in some seasons than others, and though rather later this year, it is as a rule good. Although many Pears are better gathered early, Pitmaston, according to my experience, is better left on the trees as long as consistent with safety. A few of the earliest and best placed may require gathering before the bulk of the crop, but most of those that drop are eaten by maggots and not worth considering. By the middle or end of October it will usually be ripe, and if properly developed is richly flavoured and melting.—H.

ORCHIDS.

CATTLEYA LABIATA AUTUMNALIS.

THOUGH for size of the individual blooms this grand old species cannot compare with *C. gigas*, or for gorgeous colouring with *C. aurea* or *C. Hardyana*, there is no other *Cattleya* that can compare with it for general utility and freedom of flowering at a dull season. It was a fortunate thing for Orchid lovers when the re-discovery of *C. labiata* and the immense number of plants subsequently imported brought it within reach of all cultivators, whether their means were large or the reverse, and there is hardly a collection, large or small, where it is not represented. This of itself is sufficient recommendation for it, as, no matter how much a plant may be pushed by importers or nurserymen, unless it has sterling qualities it will not find its way as *C. labiata* has. A plant to do so must not only be free-flowering and useful, but it must also be fairly easily grown, and I should think that those writers who a few years back were prophesying the quick disappearance of it from our collections, owing to poor constitution, will by now have ceased croaking. Poor constitution, indeed! It needed a fairly good one, I should imagine, to remain for seventy years or so in cultivation with only a very few plants of it imported, and those at very long intervals.

As a matter of fact, *C. labiata* has taken its place as a popular kind, just as *C. Mossiae*, *C. Trianae*, and others have done, and it is equal to the best of them. Enter a nicely warmed house on a raw November day where 200 or so of this plant are in flower and gauge its usefulness from your impressions. In such a house a great variety in the colours of the flowers will be found. The species has, in fact, given several tints that so far have not appeared in any other *Cattleya*, as witness the charming *C. l. R. J. Measures*, the little colouring in the lip of this charming albino being quite unique. The usual tint is a rosy mauve on the sepals and petals with a deeper coloured blotch on the lip. The flowering bulbs have usually a double sheath instead of the single one of *C. Trianae*.

C. labiata autumnalis is an easily grown kind, partly because it keeps well to its proper annual routine of growth, flowering, and rest. In the *Cattleya* house there is usually a fairly regular temperature kept, this rising gradually in spring and falling

again in autumn, no very great amount of fire-heat being maintained at any time, though the house often runs up fairly high by sun-heat in summer. This suits *C. labiata* exactly, as it is usually rooting freely in spring and summer, and the cooler treatment while the plants are in flower helps to preserve the blossoms. Repotting may take place, if seen to be necessary, immediately the flowers are past, as often at this time there are young roots pushing from the base of the pseudo-bulbs, but it is best to wait until February or March if possible, and in this connection the plants should be studied individually where possible. When newly imported, the plants are often, of course, of very awkward shape, and the more these can be pulled into shape at first the better. It is wrong to bury any of the leads, and if too high out of the compost, they do not obtain the same support as do those lower down where the roots can reach it easily. Many are of a straggling habit, too—indeed, the species varies most of any I know in habit—and these require large flat baskets or pans in preference to deep pots for obvious reasons. Sometimes the pulling about a plant gets in shaping it leads to its breaking back from bare places, and a well-furnished specimen results without much trouble. No compost should be given at first, but the plants potted up in clean pots, which when the plants begin to root can be covered with a thin layer of compost. Some will do so almost directly; others will go on growing for a long time before doing so, but it is best to wait until the roots are starting before placing in the compost.

Cypripedium Charlesworthi.—There is a brightness about this pretty species that is lacking in many that are more rare and valuable, and though it has not, perhaps, quite come up to expectations as a popular kind or as a parent in hybridising, it is a very pretty species none the less and well worth a place in all collections. The usual treatment accorded to the genus suits it well; indeed, its easy culture is one of its chief recommendations.

Epidendrum Wallisi.—Flowers of this very useful species come from a correspondent for a name, these being of a fairly good form. Few *Epidendrums* keep up a longer succession of flower than this, the large racemes occurring from most of the uppermost joints of the leafy stems. It is best grown in an intermediate house, where there is ample room for the long shoots. The compost may be of the usual character and the pots fairly large. It is a native of New Grenada.

Masdevallia Davisi.—Orange-flowered *Masdevallias* are not very common, and the beautiful rich tint seen on this fine species is therefore all the more admired. Though it has been in cultivation over twenty years it has never become very common, but should sufficient plants of it be forthcoming, there is no doubt it would be an extremely popular plant. Its culture does not differ materially from that of *M. Harryana* and others of the showy-flowered section, it liking a cool, moist, and shady house.

Resting Thunias.—Instead of placing the old plants of *Thunias* about in draughty, cold places in winter, it would be a good deal better to turn them quite out of their pots, shake the compost all away from the roots, and tie them up in bunches, suspending them from the roof in any out-of-the-way corner in a warm house. They require absolutely no attention from the time the leaves fall until the new growths start at the base of the stems, and are better out of the way where they take up less room. It is dangerous to ripen them off too quickly, the plants always flowering more freely the next season when the leaves are allowed to come off slowly and natur-

ally. The plants have flowered well and are now quite leafless, having stood out of doors for a month with no water but what fell in the form of rain, and the stems are very plump and hard.

Feeding Calanthe Veitchi.—Those who are in the habit of feeding this Orchid as the spikes rise must be careful after this date not to do too much to it, for the roots are already beginning to lose their hold on the compost, and it is only reasonable to suppose that the plant has by now stored most of the nutriment it requires in its pseudo-bulbs. I doubt very much if feeding ever does any real good after the leaves have attained their full size, for a decided check to root-action occurs then, and unless the roots are active they cannot certainly assimilate anything in the way of manure. Clear water then only ought to be used, and only sufficient of this to keep the bulbs plump and hard, while as soon as the leaves fall even this may almost entirely be withheld.

Miltonia Clowesi.—A good form of this species comes with other Orchids from a Somersetshire correspondent. It is a useful autumn-flowering species, each bloom about 3 inches across, the sepals and petals chestnut-brown, with markings of orange-yellow, the lip violet and white in a very pretty combination. *M. Clowesi* likes an intermediate temperature with plenty of atmospheric and root moisture while growing, not too much in the way of compost, and a flat basket or raft. It should be kept a little on the dry side in winter, but nothing like a shrivelled condition of the pseudo bulbs must be allowed. It is a native of the Organ Mountains in Brazil, and first flowered in this country in 1839.

Cattleya bicolor.—This pretty and interesting species is in flower now in many collections, and I noted a fine specimen in full bloom during the week. It is an upright-growing plant with flower spikes springing from between the upper pair of leaves, each one bearing a number of flowers. The sepals and petals are of a greenish brown or olive tint, the side lobes of the lip do not enfold the column as is usual in the genus, and the front lobe is of a very pretty crimson-purple tint, sometimes with a margin of white, as in *C. b. Measuresiana*, sometimes with green. It thrives in the *Cattleya* house in fairly large pots or pans filled with a rough, open description of compost consisting of peat-fibre and Sphagnum Moss, with plenty of large rough lumps of charcoal and crocks. It should be gently excited in spring and grown as strongly as possible until it flowers, after which it rests, and may be kept a little on the dry side during the winter.—H.

Dendrobium nobile is, I think, most useful and one of the easiest of cultivation, for where a number of plants are grown a succession of bloom may be kept up for six months out of the twelve. The flowers may be used in a cut state either without or with the pseudo-bulbs, in the latter case with little or no injury to the plants if strong. Plants while in flower may be utilised for conservatory or room decoration with good effect, and will continue in full beauty for a period of six or seven weeks. They can be cultivated on blocks of Tree Fern, in baskets, pans, or pots. The var. *nobile Wallichianum* succeeds equally as well as the ordinary *nobile*, but produces longer and stronger pseudo-bulbs, with finer flowers of more substance, the nodes not being so liable to turn to growths as in the ordinary variety on being placed into heat after the resting period. I have some plants from three to four years old taken from offsets and made up in the baskets, pots, or blocks they flowered in. A single specimen growing in a basket 16 inches square (made of Oak strips) carried over 1000 expanded blooms, while several plants carried over 800, one being in a 10-inch pot. The plants have been kept in a cool *Camellia* house since last September until the early part of the following May, when they were placed into a warmer temperature (giving shade from hot sun) to expand the flowers.—W. SLOOCK, *Hollycombe Gardens*.

FLOWER GARDEN.

THE HOLLYHOCK IN REGENT'S PARK.

THE Hollyhock is one of those good old plants that find favour with everyone. All are familiar with its stately habit and bright flowers that make a great show for a considerable season. How varied these beautiful blossoms are! Unfolding in early morning, what lovely tints are disclosed, vying with the Rose in extreme delicacy or in the brilliancy of their colouring, and

planted in the grass in the foreground of shrubberies and in other places.

The culture of the single Hollyhock is of the simplest description. Each year seed is saved from plants of good habit with the brightest blooms in various colours. Branching plants of moderate height are desirable, for the more stems there are the greater should be the show of flowers. Seed is sown thinly in the open ground about the end of March, and when ready the seedlings are transplanted into nursery beds. They grow quickly and require but ordi-

before coming into bloom. The careful preparation of soil in the flower garden is equally as important as that of the vegetable or fruit garden. It is in dry seasons that good culture tells. My practice is to supply the beds and borders with stable manure, which is placed under the roots of the plants to induce them to go downwards out of the way of drought. The Hollyhock is one of those accommodating plants that submit with a good grace to unusually free treatment; for instance, I regularly transplant them in May and June to fill vacancies after bulbs. If the operation is carefully performed they suffer very little. The plants shown in the accompanying illustration were removed to their flowering position at the end of May last. The Hollyhock season may be prolonged by pinching out the points of a certain number of young plants in groups or borders when the growth is about 18 inches high; these usually break freely, and produce flowers about the time the plants not so treated go out of bloom.

The method of staking is of importance; it need only be considered as support to the plant, and should allow its natural habit to continue unchecked. In the Hollyhock the stems proceed from the base and open outwards in an easy way. They should be supported in that position and not so rigidly upright as they frequently are. Under generous treatment these plants thrive for many years. As biennials, finer flowers are produced; as perennials, they give an excellent account of themselves that assures them a very high place amongst the garden flowers. C. JORDAN.



Group of single Hollyhocks in Regent's Park. From a photograph by G. A. Champion.

so daintily set midst an abundance of foliage on trusty stems that gently grow upwards until they become the giants of the flower border. When planted in large groups the effect is excellent; in smaller ones it is generally good, and is particularly so when massed at the end of a vista where colour is needed. The single-flowered variety is grown in Regent's Park, as it is considered better for decoration than the doubles. There are groups of hundreds together, as well as settings of a few dozen or so

nary attention for the remainder of the season, when they should be strong roots. They are perfectly hardy in most parts of England. It is to be observed that this applies to plants grown in open positions, for if crowded in nursery beds or in flower borders they do not stand severe weather. In the following spring the seedlings may be planted in their flowering quarters in borders or any other place where there are prepared stations, and then they require little more than staking and tying

Castor-oil plants.—Apart from their value as fine foliated plants in the summer and autumn the flowers of the *Ricinus* are now very attractive. The very deep bronzy-leaved kinds, such as *Bronze King* and others, do not, however, produce such highly coloured blossoms as the green-leaved kinds, nor do they look so well against the leaves as all are of one colour. I have a tall-growing variety with leaves of a deep metallic green, and the flower-heads of this are the brightest crimson imaginable. It is a seedling from a mixed packet of seed, so I do not know the name of it, if it has one.—H.

Pentstemons.—I have seldom had so good a display of these as this season, and even now (October 9) they are quite gay. Large old clumps do not produce such fine flowers as seedling plants or plants from cuttings, but it is remarkable what a long time they keep in flower. I have a large number of seedling varieties, some with flowers almost as large as *Gloxinias* when at their best in summer. Cuttings strike easily in a cold frame in autumn, and the resulting plants may be put out in spring. Seed may be sown at any time of the year, and either of these methods is far preferable to breaking up old plants.—H.

***Liatrix pycnostachya*.**—The greater number of herbaceous subjects now in bloom belong to the order *Compositæ*, and this is no exception thereto, but at the same time it is in general appearance so widely removed from the others in flower that at a casual glance it would not be recognised as a near relation of the *Asters*, *Sunflowers* and such things. This *Liatrix* forms a tuft of narrow leaves from whence are pushed up spikes that reach a height of 4 feet or 5 feet. The upper half of the spikes is crowded with bright purplish rose blossoms, a decidedly uncommon tint. Just now there is a fine tuft with numerous spikes in the rock garden at Kew, and few, if any, subjects are more admired than this. It is a native of North America, and was illustrated by a coloured plate in *THE GARDEN*, April 8, of the present year. It thrives in dry soils better than many other subjects.—T.

Daffodils.—The force of circumstances has allowed this year for a big planting of Daffodils in

a situation that will show them off to the best advantage. In common with many places in the south of England where the soil is dry and light, we had this summer a slight fire in the pleasure grounds, originating from a spark from a rubbish fire. It was, fortunately, discovered before it had made much headway, and by isolating the space it gradually burnt out after damaging more or less some 800 square yards of Laurels and common Rhododendrons. After getting out all the old stumps the ground was bastard-trenched, working in at the bottom of the second spit a quantity of decayed leaves. Plenty of Daffodils were available in several varieties, a lot having been removed from a border that is likely to be required for other purposes, and I have planted about 5000 or 6000 of them on the fire cleared space. The site, as mentioned above, is an ideal one at the end of a long glade, where they will have the grass as a foreground and be backed and flanked by masses of Rhododendrons, the background sloping gradually upwards. The front, as it was, ran in a straight line, but certain portions of the grass have been taken in to admit of some curves.—E. B.

MAY-FLOWERING TULIPS.

Now that the season is again with us for planting nearly all kinds of bulbs, a word may be said in favour of the tall-growing Tulips, which are not met with so frequently in gardens as their beauty and usefulness deserve. There are many who are always ready to add something of interest to their bulb garden or herbaceous borders, and it is in these positions the Tulips referred to find the best home, simply because they are or should not be lifted each spring the same as the dwarfier growing varieties generally used for spring bedding and window boxes. It is certainly a mistake to plant what is known as the Gesneriana and breeder Tulips in ordinary flower beds, where they have to be lifted directly they have passed out of flower to provide room for the summer occupants. They are not only not seen under the best conditions when used in this way, but what is worse, the bulbs generally are of little value the following year, owing to having been disturbed before growth was properly completed and the bulbs matured. A permanent position should always be selected for them, as the bulb garden proper, or established in the herbaceous borders, and when massed in fairly large clumps, they are unsurpassed during May for brilliancy of colour or for cutting. In planting a collection of these it is best to prepare the ground thoroughly first, as it is not desirable to disturb the bulbs afterwards. In selecting the different sites, it should be remembered that many of the varieties send up flower-stems nearly a yard high; therefore, when planting in the mixed borders they should not be placed too near the front. It is always advisable to have the different varieties distinctly labelled; and to properly mark the exact spot where the bulbs are situated, it is a good plan to drive in a strong stake that will stand out of the ground a few inches and which is stout enough to last for several years. Having marked the position in this way, from a dozen to thirty bulbs may be dibbled in round each stake, allowing, say, 4 inches space between each. Clumps formed in this way are easily supported to one neat stick before the tall flower-stems are fully developed to prevent them being twisted about by wind, which is not convenient to accomplish when each plant is separated some distance away from its neighbour, while being massed they present a more pleasing feature.

As regards varieties, the one most generally grown is undoubtedly Gesneriana and its variety major. Each has dazzling scarlet flowers, which are further set off by being backed up

with some evergreen shrubs. A good companion to the above is retroflexa, which should certainly find a place in every garden. The flowers are of a beautiful clear yellow. When fully developed the petals recurve most gracefully. If my list were limited to three varieties only, I would add Picotee, though there are several others well worthy of being represented. In the three named, however, quite distinct colours are secured, as Picotee is of a creamy white, shaded with delicate pink, a truly beautiful flower which is much appreciated for table decoration. Another important point connected with these Tulips is that they flower freely in the open during May and early June, when it is yet too soon to expect much variety from the open borders, and, moreover, as they travel well and last a considerable time in a cut state, a good collection would prove a boon to most gardeners who have to supply their employers with flowers at that season miles away from their country residences.

R. PARKER.

NEW CACTUS DAHLIAS.

MANY new forms were exhibited at recent meetings; all more or less fine as staged on wire frames. Of course, from such a way of seeing them one cannot judge exactly of their merits, because the habit of growth is known only to those who raise them. The taste now seems to be for a light arrangement of the florets, and elegant indeed some of the new sorts are. Mrs. J. J. Crowe is a light yellow, with a still lighter shade on back of each floret. This lighter tint is noticed here and there in the bloom, and does not detract from its beauty. The form is excellent. Mrs. Carter Page, a lovely shade of wine-crimson, and the flower of first-rate shape, is a very attractive variety. Uncle Tom is a very dark maroon, which is an improvement in formation upon other dark kinds in cultivation. Green's White is a capital addition; the best of the colour yet introduced. Eclipse is the most beautiful of yellows—so clear in colour and the shape quite perfect. The narrow florets stand out in star-like form to the centre, which is full. This variety may be considered the first of a new and refined type. Innovation is a fine form in which crimson and white are combined—most of the former shade. Not unlike Arachne, a sort that always creates interest, it is an improvement thereon, being larger and having a bolder look. Emperor is a large, rather heavy-looking flower of a plum-purple colour. Mrs. Saunders has flowers of a rich deep yellow, but to me it does not appear to have enough petals to make it an acquisition. Major Tuppenny is a curious variety, large, of nice form; colour a brown tint, with a heavy shade of yellow in the centre, which makes it distinct. Zephyr is a charming sort in the way of colour, which is lilac-pink, soft and pleasing. The form of the flower did not strike one as being among the best. Elsie may be named as an especially pretty variety, primrose ground, shaded pink, with everything in the way of shape and size to recommend it. Sylph is a pretty sort, not unlike Lucius, with longer florets. The latter I fancy is the better. Whirlwind belongs to a shape of which Fantasy is the type, narrow petals, which incurve towards the centre of the bloom; this shape is not the least charming if less showy than other forms. Loyalty is of similar shape, the colour being a brick shade of red. This is a full, handsome flower. Augustus Hare has richly formed blooms, crimson-brown, with lighter shade on the edges of its petals. This gives it a distinct character. Ajax is a fresh-looking buff-shaded flower of the incurving Fantasy type. Decima, still another of that form, has pink and salmon shades.

H. S.

Sea Lavenders.—In last week's GARDEN is a note on a new *Statice penduliflora*. Is this a distinct variety or only a form of *latifolia*? I have been led to the query from the fact of the last

named varying so much from seed, not so greatly, perhaps, in habit, but very considerably in size of panicle, colour of individual blooms, and still more in the time of flowering, this being a great advantage. Some few years ago when planting a border that was to be devoted almost entirely to autumn flowers, I selected a corner for alternate clumps of *Statice latifolia* and *Anemone japonica*, and the effect is very pleasing. Both are among the few herbaceous plants that will flourish for years in the same spot, and once planted give no further trouble except an annual winter mulching. Writing of autumn plants reminds me to note wonderful displays this year of *Chrysanthemum uliginosum*, especially in low-lying situations where the soil is deep and good and rather moist. Although this plant may lack, so far as its flowers are concerned, the substance of some of the best forms of *C. maximum*, it is from its light and graceful habit even more acceptable in a cut state.—E. B.

LILIUM RUBELLUM.

THE notes by Mr. Peter Barr concerning this and the beautiful *L. Krameri* should prove valuable. It is not often that dwellers in the British Isles have the opportunity of embracing such information as Mr. Barr's letter affords. It is the more valuable because of Mr. Barr's enthusiasm in his endeavours to grow this or that Lily with success in this country. Undoubtedly, as Mr. Barr says, knowledge gathered on the spot would have had an untold value in the past, but it is none the less welcome to-day, for there are hosts of people that would devote a goodly space in their gardens did they but possess the knowledge of how best to treat the bulbs when received. The information given by Mr. Barr obviously resolves itself into one of conditions and suitable environment, and as I have so frequently in the pages of THE GARDEN urged this very companionship of tree root and fibre in the successful culture of some of the more frail-growing Lilies, and to which Mr. Barr attaches no little value, the notes have interested me greatly. Some few Lilies that come to us from Japan may, and indeed are, freely manured when planted, and this to their advantage. I refer to the *L. speciosum* group more particularly. There are others, however, to which this manure is so much poison. The stony and poor soil, which is also the poorer for the free intermingling of roots and fibres to which reference is made at page 255, is just the soil I should expect to find either *L. rubellum* or *L. Krameri* succeed in. This is why I have more than once urged the planting of the latter in beds of Rhododendrons or *Azalea mollis* as the nearest possible resemblance to a perfectly and constantly drained condition. In these or similar plantations there is not only the root condition rederived as nearly perfect as possible, but in spring again the branches afford an off-time needed protection from the late spring frosts. Nor should the fact be overlooked that some of the finest *Lilium Krameri* probably that have been grown in this country were grown under these very conditions of root protection by the late Mr. Macintosh in his garden of Rhododendrons at Weybridge. These plantations of Rhododendrons were mostly composed of steep banks, that alone afforded a very efficient drainage. A chief difficulty, of course, is in securing fresh and sound bulbs of these frail and beautiful kinds, and once this is overcome many more groups may be seen in British gardens.

Mr. Barr is evidently surprised at the pooriness of the soil in which he found these Lilies in such promising health, and he is deserving of all praise for the very prompt manner in which he has given the experiences he has gained. Sooner or later this information will assuredly be of service, and when good, sound, and fresh bulbs are obtainable, there should be planted as nearly as possible on the lines suggested by Mr. Barr. Those not possessing beds of Rhododendrons will be able no doubt to form groups in places where the bulbs may receive the benefit and companionship of tree roots of some kind, or small slopes may be

planted specially with suitable subjects with a view to establishing the plants named. This reminds me also of how well I succeeded with the more gorgeous *L. auratum* in a position much too dry for most things, but which suited this kind exceedingly well. The spot was beneath the shade of a fine Beech tree and some 30 feet distant from the trunk. A bed was made of peat screenings, leaf-mould, and clayey loam, in itself of a very adhesive nature, to obviate which a very liberal addition of read sweepings was given. *Azalea mollis* and *Daphne Cneorum* were the chief plants, the bulbs of the Lilies being planted around these things and not in the ordinary way of grouping them. The Lilies were quite a success, and permanently so, as they remained for nearly ten years without disturbance. Mr. Barr has also referred to *Lilium rubellum* as a pot plant, in which state it may be said to have made its *début* in this country, having been thus grown and exhibited at the Temple show about eighteen months ago. It is worth stating, too, that it is an early Lily naturally, so that those growing it in pots will have no occasion to force it unduly; rather should forcing be left out of the question, and the flowering be brought about in the more congenial temperature of the greenhouse. — E. JENKINS.

— This charming Lily is the most recently introduced, and without exception the most beautiful of Japanese Lilies for pots. During the last two years it has been sent to the European and American markets in large quantities, but, unfortunately for the shippers, at a considerable pecuniary loss, through their not sufficiently appreciating the requirements for the packing of the bulb. The buyers, on the other hand, have not been successful in their cultivation. The blame for this is due to the exporters not giving their clients a description of the conditions which surround this Lily in its native habitat. It grows in the northern part of Japan, and is therefore quite hardy. It is found in Pine forests with a dense undergrowth of Bamboo, &c., the soil being dry and poor. It follows that success is likely to attend its culture only by keeping the above information in mind. It is therefore suggested that a poor, stony loam be used, with 2 inches of drainage and three bulbs to a 5-inch pot, keeping the soil slightly moist. Over-watering is sure to be disastrous. The pots should be kept in the shade, but not such as would naturally draw the plants. The Lily attains a height of 1 foot, and is compact and sturdy in growth. This character should be maintained. It may safely be said of this pretty Lily, which blooms in April or earlier, that it will prove to be the gem of the greenhouse, conservatory, or sitting-room. In Yokohama, out of doors, it flowers at the end of April and beginning of May. It should be grown on a raised bed of poor, dry soil and out of the sun's rays, or plant on a dry bank facing east or north. We in Yokohama grew it under deciduous shrubs close into the roots, where the condition of dryness is natural and protection is secured from the sun's rays. *L. Krameri* grows in the south of Japan under the same conditions as *L. rubellum*. It flowers one month later, requires the same cultural treatment, and attains a height of 3 feet. — G. W. ROGERS, Yokohama.

Pompon Dahlias.—It is now nearly forty years since my admiration for the pretty little pompon Dahlias was first aroused, and at that period the now numerous forms of Cactus and single flowers were quite unknown. Despite the fact that formal blossoms are not admired at the present time, I think a well-flowered specimen of one of the pompon varieties a very beautiful object. The blossoms are borne well above the foliage and on good stout stalks, so that they are little affected by the wet. True, they are lumpy and of a hard, formal outline; still, their regular symmetrical shape is not at all displeasing. The huge blooms of the show and fancy varieties are not nearly so effective on the plant as those of their smaller relatives. Some of the pompons,

too, are of remarkably bright and attractive tints, and good bushy specimens of them are hard to beat during the latter part of the summer. At the present time Cactus Dahlias hold the sway and form the subject of many notes, but the pretty little pompons are seldom referred to.—H. P.

Dahlias at the Westminster Aquarium.—I have to thank Mr. J. F. Hudson for his information as to the certificates awarded to seedling Dahlias at the Aquarium Dahlia Society's show. Being, as I have said, there on the second day, not only were the flowers faded out of all recognition, but the gummed labels or slips originally stuck on the receptacles had fallen or disappeared, for I saw very few indeed. Now that the certificate-awarding season to Cactus Dahlias is over for this year, will Mr. Hudson, as the secretary of the National Dahlia Society, kindly inform readers of THE GARDEN how many have received such awards from the National Dahlia Society and the Royal Horticultural Society this year. I can but

a lovely form: colour light yellow, with just a tint of buff as the flowers become fully open.—H.

Helenium nudiflorum.—As Mr. Barrrell (p. 285) appears in favour of a shorter name for the plant originally called *H. grandicephalum striatum*, one can only suggest the adoption of the above, which is the up-to-date name and somewhat shorter than the original, which is certainly a cumbersome one.—E. H. JENKINS.

ROSE GARDEN.

ROSA MOSCHATA (R. BRUNONII).

AMONGST all the floral beauties to be met with among the Roses, *Rosa Brunonii* as grown at Mount Usher, Co. Wicklow, would be hard to beat. It covers the entire roof of the old kiln-house, and in July is a wilderness of snowy blossom, spires like that in the illustration being produced at every joint on shoots 15 feet or 20 feet long, the growth of the preceding year, each raceme bearing thirty or forty flowers and buds, which are pure white, with golden stamens, and with a most delicate perfume. It is a native of Nepaul, was introduced in 1822, and is said to be one of the parents of the Noisette Roses of our gardens. Mr. Walpole tells me he has had the plant some ten or twelve years, and that it has never been pruned. It is now covered with great masses of richly-coloured heps. G. P.



Rosa moschata (R. Brunonii). From a photograph by Mr. Greenwood Pim, Dublin.

think that the information will show that these awards have been rather lavishly if not loosely granted. So far as I have seen the very best have been Green's White, Major Tuppenny and Mme. Medora Henson, a very true Cactus, but the general run show little or no advance on such beautiful varieties as Mary Service, Starfish, Magnificent, Charles Woodbridge and a few others universally grown. It is high time with these very popular flowers that a very severe standard should be set up. But if it be found that from twenty to twenty-five certificates have been awarded to new ones in one season alone, then will it be evident that only a mediocre standard exists.—A. D.

NOTES AND QUESTIONS.—FLOWER.

Cactus Dahlia Ethel.—This was new a year ago, but somehow few seem to have noticed it. It is

Rosa Pissardi.—This is a charming semi-double Rose, especially useful for autumn flowering. Allied undoubtedly to the Musk Roses, its fragrant flowers are always welcome. I can recommend the variety with every confidence, for it is so continuous in flowering, and the beautiful corymbs of blush-white blossoms produced upon erect growths make it a useful Rose for the shrubby border, where such Roses should be located, provided they obtain sun and are not smothered, which is often the lot of many beautiful flowering shrubs.—P.

Sweet Brier Meg Merrilies.—This has proved one of the best of Lord Penzance's hybrids here, the growth being strong and vigorous and the flowers of great beauty shown up well by the deep green foliage. It is the only one that has flowered the second time this year, though last season the pretty yellow and coppery Lady Penzance gave a few blossoms.

Those of Meg Merrilies are of a brighter crimson tint new than when opening for the first time. All are very hardy and sweet, and are now covered with the bright red heps.—SUFFOLK.

Rosa sericea.—To grow this pretty Himalayan species merely for its attractive wood and foliage would be a sufficient inducement to many admirers of hardy trees and shrubs; but when we know that it also produces lovely single white flowers with a faint lemon tinge not unlike those of *R. spinosissima altaica*, then it becomes doubly valuable. Upon young bushes the richly-coloured wood is most marked. One-year-old bushes at the present time are sending up young growths of quite a lovely ruby-red colour and adorned with immense black prickles. Upon the older growths this rich colour is not so brilliant, but even these are of a very interesting dull red colour. Good hard pruning of the oldest wood will compel the production of the very

attractive younger growths, but, of course, if a profusion of blossom is desired this must be done with judgment.—P.

Rose Mme. Lambard.—The cooler days and light frosts at night have spoiled the beauty of many of the Teas, but it only seems to increase that of this lovely variety. I have a large bunch of it on my table now, and the small pointed buds, the half-opened ones, and the full-blown blossoms are all equally beautiful. Such a fine Rose so hardy and free-flowering deserves to be planted in every garden, and to those who force Roses in spring its fine colour and the readiness with which the blossoms open under unfavourable conditions make it especially useful. Isabella Sprunt is another that opens well now, and the pretty shades of yellow in this contrast well with the reds in Mme. Lambard.—H.

Rose Alfred Colomb.—This excellent Rose, which ranks as one of the best light red varieties, has been exceptionally beautiful upon outdoor-grown pot plants this autumn. It is always very free in autumn and good at all times, but I do not remember seeing it so fine at this late season of the year. There is much resemblance between this Rose and Marie Baumann, but while the latter is grand when at its best, it is not nearly so reliable as Alfred Colomb. Certainly the latter does not droop—a bad fault on the part of Marie Baumann. The flower is a very double one, of globular form and high centre. It is usually cited as a typical high-centred Rose. Perhaps this variety is at its best upon maiden or one-year-old plants, but I have seen it very good upon cut-backs. Our American friends introduced a variety named Marshal P. Wilder, which they described as an improved Alfred Colomb, but our own growers are agreed that the two kinds are identical.—PHILOMEL.

Rose General Jacqueminot planted out under glass.—This old Rose still holds its own as one of the best brilliant scarlet-crimson kinds either for the garden, for exhibition, or for early cutting. Certainly the best method of growing it under glass is to plant out in good soil. The bushes then make almost incredible growth. I have seen this Rose make shoots quite 8 feet in length in one season. From such vigorous bushes one is not afraid to cut the flowers with a 2-foot to 3-foot stem, and as this appears to be the prevailing fashion, every gardener who has a great demand for brilliant Roses would do well to plant a houseful of this during the coming season. It is far better to devote one house to one kind than attempt a house of mixed varieties. A little experience will soon teach an observant man what is really the best treatment for each variety. In these days of cheap glass structures I am surprised there are so few houses erected for Roses. They need not be of a very elaborate description, and if just sufficient heat is provided to keep out frost, blooms of the first quality may be had at but very little expense. Every four or five years the bushes should be transplanted, when the soil may be enriched with some bone-meal and cow manure. As the plants grow, instead of coddling them, afford plenty of air at first and syringe with cold water, then, if cold draughts are avoided, little or no trouble from mildew will occur. I think this trouble of mildew often deters many gardeners from growing indoor Roses, but if the bushes are planted out and an even, buoyant temperature is maintained this fungus will rarely appear.—P.

Thinning out climbing and pillar Roses.—It is not yet too late to perform this very helpful operation. Obviously if the plants are relieved in autumn of all the very old wood the remaining growths stand a better chance of ripening, and, of course, would consequently pass through a severe winter with a diminished risk of injury. The eggs of the troublesome insect pests are usually deposited upon this old wood, and to destroy such means less trouble in the spring. Climbers either upon walls or arches or pillars that are only summer-flowering I prefer to thin during August, but the autumnals may be left

until a somewhat later period. It is surprising how vigorous growing Roses are helped by cutting away the worn-out wood. Whilst this is allowed to remain, the fine eyes at the base are prevented from breaking, and, as every gardener knows, the strong young wood is the very life of a climbing or pillar Rose. What a difference in the trusses of blossom produced from wood not more than two years old from that emanating from miffy, twiggy shoots. I would rather see a wall plant flowering low down upon good healthy growths than a specimen bare for some feet at the base and a few flowers high up the wall. It is quite true many individuals make a mistake in planting the very rampant sorts upon moderate walls. The proper kinds for 8-feet to 10-feet walls are really such as Safrano, Homère, &c. I saw Safrano quite recently growing against an 8-feet wall, and it had almost reached the top, not one thin branch, but bushy right from the ground. Where Roses upon trellises, arches, &c., have been neglected and are now a tangled mass, the present would be just the time to clear away a lot of this superfluous growth. Perhaps one cannot thin such plants as one would wish, but a start should be made, then if they are annually treated as advised, a great change for the better would be manifest.—P.

PLANTING ROSES.

THE earlier in November Roses are planted the better. Any time, in fact, after the beginning of October is suitable for the work, provided sufficient rain has fallen to moisten the ground and enable lifting to be carried on without injury to the roots. Where the plants are obtained from a local nurseryman it is much better to send a conveyance and have them lifted and placed into it at once than to have every bit of soil shaken off and the plants possibly delayed after packing. The careless way in which Roses are often treated when sent from a distance deserves the severest censure. Often not a bit of anything damp in the way of Moss or litter is placed round the roots; they lie about often in a piercing cold, dry wind with their roots quite exposed, and are then simply wrapped and tied in straw, the consequence being that when unpacked, the foliage as well as the wood has quite shrivelled. The best thing to do is to unpack them directly they arrive and place the roots in water for an hour or two. This will plump them up and invigorate the plants a little. A little trimming will usually be necessary, and, in planting, some of the finer portions of the soil must first be placed over the roots. If carried out in suitable weather, the soil may be somewhat firmly trodden as it is filled in, and the top tier of roots may come within a few inches of the surface. A mulch of loose material completes the work, this being of a manurial character if the soil is poor and needs it, otherwise half-decayed leaf soil and refuse of potting and other soils will suffice.

In preparing quarters or beds for Roses, deep cultivation is absolutely necessary. Soils inclined to be heavy are usually looked upon as most suitable to Roses, and if they are well tilled there is no doubt that they grow the finest Roses. A soil that is wet and cold in winter and cracks badly directly the sun reaches it in summer is not the best by any means, though it may be heavy. When such a soil can be brought into a friable state by the addition of opening material, as ashes, road sand, and leaf soil, then it is the ideal one for Rose growing. Light, sandy soils, on the other hand, require the addition of clay, brick earth, marl, or some such substance to render them more holding. Here cow manure is preferable to that from stableyards, while additions of fresh and fairly heavy loam should be made as often as possible. The manure in this case should

be placed in the bottom of the trenches when the soil is being prepared, and Tea-scented kinds, as a rule, especially the strong-growing climbers, make great headway when planted in them. On the red sand in Gloucestershire, one of the very worst of soils for producing Roses of good quality, I have had excellent results when separate beds have been treated in this way. The Mme. Isaac Periere and Victor Verdier class used to make immense growths, that, shortened a little and pegged down, gave a very large number of excellent flowers. Niphotos, too, was a notable success, but the Comtesse de Nadaillac and similarly habited Teas, strange to say, did very little good.

A good medium soil needs little beyond trenching a couple of spits deep to fit it for Rose culture, and feeding from the surface will be necessary annually, applying the manure in the form of a mulch in spring after the pruning is done. Anyone with such a soil may with advantage plant the free-growing, constantly flowering Tea-scented section in quantity.

H.

NOTES AND QUESTIONS.—ROSES.

Rose Daisy.—This is a very free and constant flowering variety, but I have failed to discover any other merit in it. It is undoubtedly a seedling from Mrs. W. J. Grant, for the growth and colour of flower show this. Unless a Rose is distinct and has some claim as an improvement upon existing kinds, why burden our already prodigious collection with such an addition as this? In Killarney, presumably another seedling of Mrs. W. J. Grant, the lovely semi-double flowers were very fine during the first few days of October.—P.

Rose Augustine Guinoisseau.—Of the autumn-flowering Roses the above lovely sport of *Ja France* is very generally esteemed. It will hardly bear comparison with its parent in the Rose season, the flowers then being devoid of substance, but just now it is delightfully fresh and attractive, and, moreover, it is one of the most fragrant kinds. The lengthening nights seem to be just suited to the proper development of the variety. Being nearly white with just a tinge of flesh-pink, a mass of it is probably the first to arrest the eye even when viewing a large collection.—P.

Roses on own roots.—A couple of months ago I was in just your position. I am making a new garden, and I was determined to have a lot of the best Roses all on their own roots. I wrote to the leading nurserymen and found that no one could supply them. Then I wrote and asked for quotations for cuttings. F. Cant, Colchester, was the lowest. He sent me excellent cuttings at about 7s. 6d. per 100. I got cuttings of other Roses which he had not got from other firms, and am getting a few remaining ones to-day from France. I put these cuttings in a close frame without heat, some in fine gravel, some in cocoa-nut fibre. I sprinkled them twice daily. Already some 90 per cent. of them have struck.—A. K. BULLEY, *Neston, Cheshire.*

Rose Gloire des Rosomanes.—As a brilliant crimson autumnal there are few Roses to surpass this old favourite. How beautiful the semi-double Roses are at this season of the year. Just now the new growths of *Gloire des Rosomanes* are each crowned with trusses of buds, which being semi-double have a fair chance of expanding; whereas very full kinds would decay on the plant. A good hold bed of the above Rose would be a grand feature upon the lawn. There is no set style in the growth of this variety as with many of the Hybrid Perpetual class. Gruss au Topf is surely a seedling of *Gloire des Rosomanes*, although it is described as being a Hybrid Tea. The growths of the two kinds are very similar, the same peculiar shiny green wood and whish spines being evident in the later introduction. They would certainly harmonise together and form a very bright mass of colour for the autumn days.—P.

The toad.—From the earliest times the toad has been associated in the popular mind with a host of vague and ludicrous fancies as to its venomous qualities, its medical virtues, or, most commonly, the hidden toadstone of priceless

value. To these venerable creations of the imagination have been added others equally absurd, such as that touching toads will produce warts on the hands; that killing toads will produce bloody milk in cows; that a toad's breath will cause convulsions in children; that a toad in an open well will ensure an unfailing supply of water, or in a cellar will bring prosperity to the household, &c. The Massachusetts Hatch Station which has conducted an investigation of the habits and food of the American toad announces that a careful examination of the stomachs of a large number of toads showed that 98 per cent. of its food was animal matter, worms, insects, &c. "Eleven per cent. of the toad's food is composed of insects and spiders beneficial or indirectly helpful to man; 80 per cent. of insects and other animals directly injurious to cultivated crops in other ways obnoxious to man." Properly speaking, the toad is a nocturnal animal, feeding as a rule continuously throughout the night. It eats only living and moving insects, caterpillars, &c.

IMPROVING PLANTS BY SELECTION.

AN admirable paper dealing with selection and its effects on cultivated plants has just been issued by the United States Department of Agriculture. It was written by M. Henri L. de Vilmorin, of Paris, whose recent death inflicted a heavy loss on agriculture in all civilised countries. Of the plants referred to in the paper none possesses greater interest than *Brassica oleracea*, the wild type from which all the many forms of cultivated Cabbages have been derived. In its native haunts it may be found to-day on the limestone cliffs that border our coasts. It is a half-woody, half-herbaceous plant, possessing thick fleshy branches and leaves, the stem and root crown also being somewhat swollen. Ordinary Cabbages represent this plant reduced to its simplest form—that is, to a single erect stem bearing at its free extremity numerous large, thickened leaves, more or less closely crowded together, which, according to their shape and the manner in which they are laid one over the other, form heads that are oval, conical, spherical, or flattened. Similar outlines are found in the Savoy, which differ from ordinary Cabbages in the development of the spongy tissue between the little nerves of the leaves, imparting to the upper surface a blistered appearance. The same variety of forms is found among the red Cabbages, where the entire leaf is coloured a deep red. All these forms are the result of a patient and prolonged selection which has given to them almost complete permanence. These, however, are not the only modifications of *Brassica oleracea*. There are various headless Cabbages or Kale, well known to farmers, and especially to sheep feeders, which differ widely in size, shape, and colour. The Collard, for example, has round, spoon-shaped leaves, overlapping, but not crowded together to such an extent as to deprive those in the middle of air and light and thus blanch them, as is the case with the inner leaves of the head or hearted Cabbage. There are many varieties of Kale, with the leaves green or red, entire or much divided, flat or curled—Portugal Cabbage, Cow Cabbage, branched Kales, Palm Borecole, and many others, among which Brussels Sprouts is not the least remarkable. Taking advantage of the tendency of the stem to thicken, selection has established a form the entire stem of which becomes large and fleshy, and yields a product that can be used as a vegetable when young and tender, and is valuable as

A CATTLE AND SHEEP FOOD

in winter when it has attained its full development. If, instead of involving the entire stem,

the swelling is localised a little distance above the ground, the plant well known to English farmers as Kohl Rabi is formed, and there are numerous varieties—large or small, early or late, violet-coloured or white. The capability of becoming thickened and fleshy is not limited to the stem. The tap-root possesses it also, and plants which showed a marked tendency to vary in this way having been noticed and reproduced have yielded, under the influence of long-continued selection, the Turnip-rooted Cabbage with white flesh, and the Ruta Baga with yellow flesh. They are round, oblong, or flattened, and may weigh as much as 18 lbs. or 20 lbs. Selection has produced these numerous forms from a root that weighs no more than 2 ozs. in the wild state. The many kinds of Cauliflower—early or late, of varying size, white, yellow, rose or violet in colour, and of various degrees of hardness—have likewise been developed from *Brassica oleracea*.

Celery is an instructive illustration of the results of selection. The useful part of the plant being the leaf-stalk, efforts were, and still are, directed toward the development of this organ by reducing other organs to the smallest size compatible with the efficient growth of the plant. The self-blanching Celery was found in the neighbourhood of Paris a dozen years ago. The original plant yielded seed from which was raised a good proportion of the new variety, but also some green plants. By persistent selection the proportion of green plants has been considerably reduced, but they have not yet entirely disappeared. By way of compensation this race has yielded a pretty variation with rose-coloured ribs, which is becoming fixed. It had been noticed that the fleshy roots of Celery, on which the leaves are inserted, possessed a special flavour and were sweeter than the stalks, although not so clear in colour. By selection certain plants have been obtained in which the root has been modified into a large, well-shaped, and very regular, rounded enlargement, as in the Erfurt and Prague Turnip-rooted Celeries. The sugar Beet, the garden Beet, and the Mangold have all been produced from one common wild progenitor, *Beta maritima*. The deep red colour of garden Beets is of very great importance. But in sugar Beets the absence of colour—that is, the perfect whiteness of the flesh of the root—is a condition of perfection, and selection has effected this remarkable specialisation. There is no necessary or absolute correlation between the colour of the root and that of the foliage. In garden Beets a thick, tender, sweet, and richly-coloured flesh is much desired. Now, a variety may have these qualities without its foliage showing, at least for the greater part of the growing period, any particularly deep coloration. In England it has been the fashion to produce

VARIETIES OF GARDEN BEETS

with large and deeply coloured foliage, as in Dell's Dark-leaved Beet. Some authorities have not hesitated to say that this is putting colour to a bad use, that it is better to concentrate it in the root. As a matter of fact, the dark red Egyptian and Cheltenham Green Beets are living proofs that a variety may have finely coloured roots and at the same time preserve in its leaves a noticeable proportion of green surface. Up to the present time selection has been applied particularly to annuals and biennials, plants in which generations succeed each other rapidly. Under the management of corporate bodies it could be applied, for example, to forest trees, in which the difference between the best and the poorest specimens is, as is well known, extremely great. Since a well-

established race of sugar Beets has been obtained, why should not also a Cork Oak be bred, the cork of which should be of rapid development and faultless texture? The value of such cork would be double or treble that of the ordinary product.

It may be instructive to give the summary of M. de Vilmorin's conclusions. Selection, he maintains, is the surest and most powerful means that man possesses for the modification of living organisms. Variations are easily induced by change of environment and cultivation. The latter is an addition of especial importance, because it permits variations which are spontaneously produced to be easily observed and selected. These modifications may affect the external characters of form, shape, and colour, or the internal qualities of flavour, perfume, chemical composition, and others. Selection may modify organisms in any direction not incompatible with the preservation of life, but there are certain characters that are mutually antagonistic—individual size and number of parts, great productiveness and extreme earliness, relatively large size of a part and very intense coloration. In order to be effective, selection must be continued in one and the same direction. The value of the results obtained depends on the ability and judgment of the breeder; varieties may degenerate as well as improve under selection. The unit of selection is the individual. The superiority of one seed over others from the same individual, with respect to the transmission of characters, cannot be foretold.—*The Times*.

KITCHEN GARDEN.

FIELD POTATOES.

FIELD space is usually allotted to the growth of the main winter and spring supplies of Potatoes in all large establishments. Even the very latest maturing varieties are now quite ready for lifting, and it is great folly to delay the work any longer. When the ground is in a very dry condition and sharp frost does not occur all goes well, but if after repeated autumn soakings severe frost comes, those sorts the tubers of which lie very near the top of the ridges are sure to get caught. Moreover, second growth sometimes occurs, which ruins the quality. Some separate the seed from the eatable tubers as soon as lifted, others allow them to go together and sort them over in inclement weather. In any case sufficient should be stored in a cool shed and covered with dry Bracken or bags, the remainder being clamped or put into cellars as the case may be. When clamping is adopted, if the tubers are at all wet when lifted, the clamps should not be covered up at once, but allowed an interval of a few days in order that the wind may pass through and partially dry them, as under such conditions they keep much better. A good old-fashioned plan is to insert a Seakale pot at the top of the clamp to act as a conducting shaft for fresh air, this being blocked up with straw or Bracken in very severe weather. Where plenty of cellar space exists the labour of clamping may be spared, although in very mild winters such structures are liable to become too warm, the tubers losing quality in consequence. No better place than a cool cellar can be selected for storing the seed tubers, as they can then be examined at intervals, any decayed ones being soon detected. Schoolmaster is a good eating Potato at this time of year, and Magnum Bonum from light, warm soils may also be used. Those from stronger, more retentive land, the tops of which were somewhat green when lifted, will be all the better for lying several weeks longer before being used. Gloucestershire Kidney is still a most reliable all-round table Potato in most soils and eats well during the spring months. I do not advise clamping Regents where these are grown,

as being liable to disease they should be stored where they can be frequently examined.

B. S. N.

Oxalis crenata.—This tuberous rooted Oxalis is being grown in quantity this season at Dropmore, where its thick, fleshy stems and profuse leafage make it quite a conspicuous object in the garden. Were this Oxalis a desirable forage plant what a quantity of food per acre would it produce. What its fitness in that direction may be I do not know. Certainly the growth at Dropmore is very dense, some 18 inches in height and 20 inches through in a single row. The tubers when ready to lift in the winter are almost fir cone-shaped, but smoother and handsomer. They have reddish skins. Their edible value seems to be very much as is that of the *Stachys tuberosa*.—A. D.

Climbing Butter Beans.—A gardener recently gave me a handful of pods of the Mont d'Or climbing Bean. They were flattish, of good length, smooth, and handsome. He remarked that not only had he found these Beans to withstand drought and to continue bearing more freely than did the Scarlet Runners, but also that the pods were so liked by his employers that they seemed never to tire of eating them. When the few pods were cooked and served with a little gravy I found them to be singularly tender and delicious, yet when pods have been tested elsewhere by cooking I have found them rather hard and almost flavourless. The fault seems to lie in allowing the pods to hang too long until they become thick, rounded, and the flesh certainly too hard.—A. D.

French Carrots.—In the Paris market the variety we call the Parisian Forcing is preferred, as even in the early autumn months this appears the most in demand. A variety named Carrote Rouge Hâtive, about twice the length of the Forcing variety, and doubtless a form of Early Nantes, is also much in request. I think these small sweet, quickly-grown Carrots are far more useful than our long-rooted kinds with so much hard core. I also noticed a very distinct Carrot, Rouge Demi-longue de Carentan, a beautifully-coloured root not so thick as the Nantes and a little longer. This is much liked on account of its small top and smoothness, as it can so quickly be prepared for use. It is also a splendid variety for forcing. These small Carrots are not so liable to grow out of the soil as the long-rooted kinds or become green at the crown.—G. W.

Potato British Queen.—Has "A. D." or any other correspondent any knowledge of the above-named Potato? I never heard of it until about a fortnight since, when I saw a grand lot of it in a greengrocer's shop in Norwich. He had a few days before been into Lincolnshire and purchased 100 tons, and, being a very practical man, would not have done so had he not previously proved them to be of first-rate table quality. In shape the tubers very much resemble Magnum Bonum, but the skin is rough, though not so rough as in some sorts. It is just the Potato to take the purchaser's eye, and, while fit for use now, will keep well till spring. My friend informed me that in Lincolnshire there were grand crops of Potatoes, but as the disease has already made sad inroads in some districts, the least delay in lifting now may have deplorable results.—J. CRAWFORD.

Some things better omitted.—It has often struck me what a waste of time and roots there is in staging Parsnips and long Carrots at the summer exhibitions. They are of no value for immediate use, and for storing, of course, they are quite unfitted. It is seldom, however, that attention is called to such useless expenditure of labour; indeed, I cannot recall an instance when it has been brought forward until "A. D.'s" note appeared on p. 242. I quite agree with him in the opinion that neither these, long Beets, nor Rhubarb are necessary for summer exhibition, and they should be accordingly struck out of all shows held prior to the end of August. Nor do I see the necessity for such early exhibitions of

Celery. While there are abundant salads of other kinds, Celery is uncalled for. September seems quite soon enough to commence digging Celery. What is produced by early sowing and forced growth earlier than that date is often of a seedy nature, and for salad useless. Parsnips, like Potatoes, cannot be judged by the leaf growth, and the digging of a sufficient number suited for even one class means a good deal of waste, particularly in some soils. The same remarks apply quite as truly to the long Carrots and Beetroot.—W. S.

Peas and drought.—Here we have not suffered so badly from drought this year as growers in the south, but in any season or situation the advice given by Mr. Molyneux on p. 264 is worth having. Now is the time to prepare the Pea quarters if the ground is vacant, and I have just finished one large quarter that was cleared of late Broccoli. Soil deeply stirred and well enriched now is mellow and warm in spring, providing a deep and good root-hold such as Peas delight in. I am glad to see Mr. Molyneux deprecate the time-honoured plan of digging manure into single trenches for this important crop. It is done in most cases just before sowing, and the soil has no time to settle properly, this allowing the sun to enter far more freely than is advisable, while the manure is in a raw state when the roots reach it. Thin sowing and mulching again are excellent details of Pea culture, but I can hardly agree with Mr. Molyneux that the tall varieties are best. I like the dwarf kinds that grow say 4 feet or 4½ feet high. The rows can be placed closer, while the cropping qualities, according to my experience, are quite equal, if not superior, to those of the taller kinds. Some of the finest flavoured and best coloured Peas I know grow to about this height.—SUFFOLK.

Savoy Cabbages.—The season has been very unfavourable generally to summer-planted Brassicas for a winter supply. Where got out early, especially in the case of Brussels Sprouts, the plants are now abnormally strong and yielding soft, coarse sprouts. Savoy Cabbages planted early turn in so soon in the autumn that they are quite worthless, and those planted during the summer generally are very irregular and unsatisfactory. A striking exception, however, is a breadth of Bijon, a rather dwarf, compact, and dark green variety. No gardener wants now or cares for the old Drumhead. It may suit the market grower very well as a field crop, and that class of consumers who are not very choicé as to their winter greens. But the Bijon, Early Ulm, Tom Thumb, and Dwarf Curled are very good, especially when got out fairly late and close together, because large heads are not wanted, neither, as a rule, are Savoy wanted before Christmas. No doubt there will be considerable scarcity of all descriptions of winter greens after the new year. Gardeners will have to husband their resources to the utmost, so far as greens are concerned, during the coming winter, and extra quantities of forced products, Seakale, Asparagus, dwarf Beans, &c., may be needed.—A. D.

Vegetable Marrows.—Notwithstanding the note by "G. H. H.," I must still hold to my expressed opinion as to this vegetable. It is watery and insipid in flavour, and not to be mentioned in the same breath with Runner Beans as a useful cottagers' vegetable. A cottager who makes a rubbish corner of a place where it is possible to grow good Marrows must be a rather wasteful one, for they require culture the same any other, and a warm, sheltered position if they are to arrive at a fruiting state by July, as I said in my note. And to take an average, I should say that for every dish of Marrow that finds its way to a cottager's table there are twenty of the Beans. It is true that Vegetable Marrows are sometimes saved for winter use, but unless they are growing under exceptionally good conditions, the production of two or three that will keep prevents the plant from producing any more that are fit for present use. This is not true economy by any means, for with far less trouble good Parsnips

may be grown, and these are superior in every way. As a variety Marrows are all right, but I have often judged at cottagers' shows where a dozen pairs of Marrows are put up, each showing careful culture, while many of the more useful and profitable kinds were represented by perhaps two or three.—H.

NOTES AND QUESTIONS.—KITCHEN.

Onion Cranston's Excelsior.—This is a very fine type of Onion. In many respects I consider it equal to Ailsa Craig. Early in September at Shobroke Park, near Exeter, I saw several bushels of this Onion. It was not a case of a few fine bulbs, but each one may be said to be a counterpart of the other; some of the largest weighed nearly 3 lbs.—J. CROOK, Forde Abbey.

Carrot Matchless Scarlet.—This season I grew this beside several other kinds, and when taking them up in the middle of October I found Matchless Scarlet by far the best. With me it grows clean and straight, and although not so thick as some, it is longer and of a better colour. Some of the roots from crown to tip were 20 inches long. They were thinned to 4 inches apart, as my object is to get a big crop of good, even-sized roots.—J. CROOK.

Coal ashes for Potatoes.—I am not sure that practical growers will agree with "J. L." as to the use of coal ashes for Potatoes. I think it is generally accepted that coal ashes have no manurial value, and the only use to which they can be put is to lighten very stiff, retentive soils. Further, I think that coal ashes are very conducive to scab on Potatoes, as I have seen this where the practice has been to dig in coal ashes when preparing ground for the Potato crop. The use of lime I fully agree with, and no doubt it is the feeding of soil year after year with no application of this valuable ingredient that is accountable for the whole or partial failure of many crops beside Potatoes.—G. H. H.

GARDEN FLORA.

PLATE 1245.

A HYBRID GARDEN POPPY.

(WITH A COLOURED PLATE.*)

THE plate to-day represents a very beautiful hybrid Poppy that appeared in the garden of Mr. H. G. Moon at St. Albans, where *P. orientale*, *P. pilosum*, *P. rupestris* and other species were also grown, the inference being that the pollination was the result of insect intervention, or possibly of the wind. True hybrid Poppies are rare in gardens, but spontaneous hybrids now and then appear, as observed by Rev. C. Wolley-Dod, Mr. Carrington Ley, M.M. Vilmoren, and other growers of these brilliant flowers. On the other hand, some species are extremely variable as grown from seed in gardens, especially if due care is taken in selecting seed from distinct flowers, a plan adopted years ago by Rev. W. Wilks, to whom we are indebted for the Shirley Poppies, now so much grown for cut flowers. The Opium Poppy (*P. somniferum*) is said to have been a cultivated selection from the wild white-flowered *P. setigerum*, and varies enormously in colour, and to some extent in habit, as also in having both single and full double flowers. *P. nudicaule* has red, white, orange and yellow variations, and the dainty little *P. alpinum* and its form, *P. pyrenaicum*, have white, rose, or salmon-flushed flowers. Of late years, even *P. orientale* has varied from scarlet with a black blotch to flesh-white, rose-pink, and purple-rose apparently without any cross-fertilisation having taken place.

Mr. Moon's beautiful hybrid is, like Mr. Carrington Ley's variety, a little difficult to manage in its early stages, but when strongly

* Drawn for THE GARDEN by H. G. Moon in his garden at St. Albans. Lithographed and printed by J. L. Goffart.



THE WEEK'S WORK.

KITCHEN GARDEN.

WINTER CUCUMBERS.—Plants occupying pits and frames will in most instances be on the move, especially where the bottom-heat has had to be maintained by the aid of fermenting material alone. Both nights and days are too cold for new growth to be formed. This being so, a few fruits must be allowed to perfect on the earliest-planted batch of winter fruiterers. No more, however, than what are absolutely required for present wants must be allowed to remain on the plants, as what the cultivator must study is the retention of as much energy as possible, as such will be needed during the dull, sunless days which lie before us. Some time ago I advised the use of as little artificial heat as possible, and so long as fairly warm weather and frost-free nights continue, this practice must be adhered to, as short-jointed growth is the best guarantee for the plants passing through the winter free from attacks of spider or thrips. After October great care must be exercised in the use of the syringe, as wet foliage through hours of darkness will quickly produce the yellows and cause the tiny fruit to fall, and once the plants get into that condition they do not easily recover at this time of year. The best way is to take advantage of extra fine sunny days, then to close the house say at 1 p.m., giving the under surface of the leaves a vigorous syringing with tepid soft water, and when sun is absent, be satisfied with damping of walls and floors. Where evaporating tins exist, they should be filled with diluted farmyard liquid, the steam from this being helpful to growth and obnoxious to insect pests. Avoid crowding the growth and train them regularly and at frequent intervals to the trellis, pinching out the points of the leaders as soon as they reach their limit. Surface-dress each time fresh roots show on the surface of the beds, but by no means add more than half an inch at a time, as it only becomes sour. Sweet fibrous loam to which have been added some quite new horse droppings and a little crushed mortar rubble or plaster suits them well. Watering must be carried out very carefully, allowing the roots to need it, and then soak the mounds with sweet liquid manure at a temperature of 85° or 90°. Air very cautiously, a very little at this advanced date being sufficient to sweeten the atmosphere and prevent injury from scorching. If the house after closing early on fine sunny afternoons runs up to 90°, no harm will ensue. This early closing lessens the need for so much pipe heat through the night. If thrips appear, fumigate mildly two evenings running.

FORCING ASPARAGUS.—Where this vegetable is forced in quantity early in the season it will now be necessary to collect good quantities of Oak and Beech leaves for the purpose, also for forcing other kinds of vegetables in winter and early spring. Asparagus and Seakale will be the first to need attention, and where permanent beds of the former are furnished with pigeon holes, spaces between the beds may be filled with leaves about the second week in November. Where good leaves are not over-plentiful, use three parts leaves to one of stable litter, treading very firmly at frequent intervals. The surface of the bed may be covered with 6 inches or 8 inches of short litter, and, if at hand, spare lights placed over them resting on flower-pots. This latter arrangement keeps off heavy rains and snowstorms. The best way is to have a double number of beds, forcing half one year and the rest the next. From old age or other causes open-air beds sometimes get into an unprofitable condition, when it is best to lift the roots piecemeal and force them in ordinary hotbeds or in Cucumber or Melon houses. Make up the bed about 4 feet high at the back, sloping gradually towards the front, and when the heat has declined sufficiently, cover the surface with a few inches of leaves, and on these lay the roots, covering them with 3 inches of loamy soil. A testing-stick or bottom-heat ther-

mometer should be used and the glass covered with mats or Bracken, removing it when the grass makes its appearance. The same bed will answer for other batches if the linings are renewed, but if an uninterrupted supply of Asparagus is needed, a second bed will have to be made up in a short time. Beds in Cucumber houses are useful for forcing this vegetable, as by using the chamber pipes a comfortable bottom-heat can be secured. As a rule, a top temperature of from 55° to 60° will be sufficiently high, as if a higher is given, a weak, tasteless growth will follow. These forced batches are much benefited by applications of manure water once weekly after growth commences. From the middle to the end of November is a good date to start the first batch, as, unless long enough rest is allowed, the crowns come away slowly and weakly.

GREEN VEGETABLES.—These will now be fairly plentiful, consisting of the earliest planted Coleworts and Cabbage sprouts, the result of heading back old plants of summer varieties. Cabbages which were sown especially for furnishing nice solid heads just as the frost commences will be tender and delicious. By the use of the foregoing, Savoys and Brussels Sprouts may be left alone for a short time longer, as a few rather severe frosts are required to impart the so much appreciated flavour in the two last-named vegetables. J. C.

OUTDOOR FRUITS.

PLANTING.—The one great object which the enthusiastic and up-to-date fruit grower will now have in view is to get through with all planting operations as speedily as possible, consistent with good workmanship, for trees of all sorts will now be in the best condition when they can be moved with the least danger of receiving a check, for, with their roots lifted in good condition and transferred to fresh soil without being allowed to dry up in the interval, they will immediately begin to push forth fibrous roots that will enable the trees to become at least semi-established before winter has set in. Trees planted in autumn, and well looked after as regards mulching and watering later on, will hardly feel the check of removal and may be allowed to carry a crop next year, a thing that it would be unwise to allow winter or spring planted trees to do. Nurserymen will scarcely be ready as yet to supply trees, as they do not care to commence operations until the leaves have fallen and the ground has become well softened with rain, but planting from home-raised stock need not be further delayed and the getting of these out of hand will help matters forward considerably and leave all available labour open to deal with bought-in stock in an expeditious manner when it arrives. Since my previous notes, dealing with the preparation of the ground intended to be planted, appeared there has been in this district an abnormal downfall of rain, over 4 in. having fallen in eighteen days. With a return to fine weather, I find that the soil which was dug and prepared as advised is now in a uniform condition, while that left undug is very wet in some places and very dry in others. Planting on the dug ground will be a pleasure, as one knows that it is in just the right condition to work among and about the roots. In taking out the stations for planting, make sure that the bottom is made firm so that there shall be little or no sinking, and allow for each tree only sufficient depth to admit the roots so that the upper ones may be quite near the surface and, above all, see that the stem is buried no lower than it has been previously. For heavy and damp soils I like to elevate each tree on a slight mound, the depressions between the mounds act as surface drains and the feeding roots are kept in a more wholesome state than they would be if planted on the level. On the other hand in very light soils any such elevation would be a mistake, as in dry seasons the roots would get burnt or dried up. If the trees to be planted are of a size to make staking necessary, the stakes should be driven down into the holes before the trees are planted, as this will prevent all fear of driving the stake on to any of the roots and

established it is very brilliant and quite distinct from any other Poppy known to me. One can only guess at its parentage; it may have been *P. pilosum* × *P. bracteatum*, or *P. bracteatum* × *P. rupifragum*, but that can only be proved by actual experiment, a by no means easy matter. These hybrids now and then appear in gardens spontaneously, owing to some fortuitous circumstances—some lucky fly, or tree or breeze-carried pollen—but nearly all actual attempts at cross-fertilisation made by cultivators seem, from some hidden cause or other, doomed to disappointment. So far as I know, the only authentic hybrids reared in gardens are those of MM. Vilmorin and Co. alluded to below. The difficulty, perhaps, lies in the initial stages, for true hybrids of the first generation seem always barren. This was so with MM. Vilmorin's plants, but by crossing these back again with *P. orientale*, a seed-bearing race was obtained.

Apart from Mr. Moon's plant, one of the best of all the hybrid Poppies, according to the Rev. C. W. Dod, is Mr. Carrington Ley's hybrid of *P. orientale*. Mr. Dod states that he has had several plants this season 4 feet across and bearing thirty to forty flowers open at the same time, the flowers supporting themselves on elegantly curved stems at various heights from the ground. This hybrid is the offspring of *P. rupifragum* × *P. orientale*, and originated in Mr. Carrington Ley's garden near Maidstone. Mr. C. W. Dod also mentions spontaneous hybrids between *P. caucasicum* and *P. Rheas*, which are of annual duration only and do not appear to seed.

At the hybrid conference at Chiswick in July last, the late M. Henri Vilmorin, of Paris, gave a very interesting account of a successful attempt at hybridising the Opium Poppy (*P. somniferum*) with *P. orientale* or *P. bracteatum*, the hybrids of which did not produce seed until they were again cross-fertilised with *P. orientale*, when a permanent race of showy plants that grow freely from seeds was obtained. The fact that this race is the produce of an annual and a perennial species is a point of considerable interest. F. W. B.

Nicotiana sylvestris.—Two appreciative notes have recently appeared on this beautiful Tobacco plant. The writer of the earlier note (p. 194) had evidently not seen the plant in its greatest beauty, as he only alludes to its effect as a fine-foliaged plant. True, it has massive leaves and a good habit of growth, but if it had to depend on these for popularity it would have to give place to other and better-known plants. In the face of some grandly-flowered plants which I recently saw it is strange to read that "the foliage is the thing, of course, but when joined with beautiful flowers the plant is all the more worthy." To my thinking, the lovely flowers put the foliage effect entirely in the shade. Those who have not yet seen the plant may imagine something of its beauty and worth from the fact that it bears tall spikes, each with about a score of pure white flowers very like those of the older *N. affinis*, but longer in tube and slightly less in diameter, and, best of all, without that unfortunate defect which makes the older variety appear to be dead or dying during the greater part of the day, for the flowers in the new variety do not close even in bright sunshine, but simply hang at a sharper angle on the stem, assuming a stiffer habit as evening approaches. The lateness of its flowering adds to its value, as it lasts till quite late in the autumn; indeed, only the approach of winter puts an end to it. Personally, I propose substituting it largely for *Hyacinthus candicans*, as it lasts much longer in flower and is of such a pure white. I look on it as one of the best of new introductions, and predict for it greater popularity than *N. affinis* ever gained.—J. C. T.

injuring them. Cut away all damaged portions of roots, severing them at the point of junction with a branch root wherever possible, then the cut surface will heal over instead of dying back. When putting the tree into position remember that most trees grow best and quickest on the south or south-west side, and to one of these points of the compass the worst side of the tree should be turned. By following this out and by judicious pruning well balanced trees will eventually be made out of what now may seem rather unpromising material. Work some of the best soil well in among the roots, so that no hollows or badly filled crevices may be left, but refrain from ramming the soil immediately round the roots with a rammer or from treading it. These operations should be left until sufficient soil to protect the roots from injury by direct contact with rammer or boot has been added. If the roots are too plentiful to allow the soil to be worked in among them in a satisfactory manner by the hand, then by all means use water to wash it in and leave the filling up and finishing off until another day. Of course, a little water is of no use. It should be a thorough soaking, sufficient to melt the particles of soil and cause them to settle down close together. The foregoing remarks may be taken as applicable to the planting of all sorts of fruit trees, but we have also to consider individuality as well, and to add to the soil, if possible, those ingredients which tend to promote the best type of growth. For general purposes I know of no material which has such a good effect as wood ashes or those made from the burning of all sorts of garden rubbish, in which a good deal of garden soil is usually included. For Apple and Pear trees this alone is an admirable and sufficient addition to ordinary garden soil, but for stone fruits I am never satisfied unless I can include a plentiful supply of lime, as I am convinced that they need it in considerable quantity either as a natural or an added constituent of the soil they occupy. Another thing that stone fruits generally require is a considerable depth of soil, the Apricot especially revelling in a well-made deep border provided it has been well drained.

GATHERING FRUIT.—By this time most fruits will have been gathered, though there may still be some of the latest Pears hanging, and Medlars, too, will still be on the trees in many places. The first dry day should be chosen to finish up all the work of gathering, for the fruits will get no good by being left on any longer. Pears, except perhaps the hardest of the stewing varieties, should always be stored in single layers where they can be easily seen and got at, as they require looking over often and very careful handling, as they bruise readily from the time they commence to soften. Medlars should never go into the same store as other fruits, for the moisture arising from the latter will be sure to spoil them. The only kind of place in which they will “blet” properly is a dry one, where they can be kept cool as well. Heat and moisture they will not put up with. They go mouldy at the crown under such conditions, and the very slightest touch of mould on the fruits spoils their flavour at once. Walnuts which have been gathered and placed in heaps should now have the pulpy outside casing removed from the shells, which latter should be rubbed dry and the Nuts then stored in Seakale pots placed upon a stone floor, a position in which I have found both Walnuts and Filberts keep really well.

FRUIT ROOM.—In the fruit room proper it will be necessary to overhaul the fruit, frequently removing all that show the slightest signs of decay. It is during the first few weeks after storing that such fruits are found, for in spite of every care some blemished fruits are sure to find their way to the benches. As early sorts of Apples are cleared off, the later ones may be given more room, and it is advisable to do this as soon as possible while the fruits are still hard and green, then there is less chance of bruising them. A mixed fruit room is an evil, and a very common one, for the conditions which suit the Apple

crop best are bad for ripening Pears, and it ought to be the rule to have at least a small portion of the store room which could be divided off and kept warmer and drier for the benefit of ripening Pears, as these are so much better when ripened in a temperature that would be too warm for Apples to be kept in. Pears being taken to the table should be tested day by day, as many sorts are liable to go sleepy almost as soon as they ripen, and in the early stages of this defect it is almost impossible to detect it from outside appearance.

CORNUELIAN.

CHRYSANTHEMUMS.

EARLY-FLOWERING CHRYSANTHEMUMS.

THE present season will be remembered as one in which the early-flowering Chrysanthemums in most gardens were distinctly later in blossoming than has been the case for many years. Varieties which in an ordinary season have been at their best during the earlier half of September were not seen in anything like proper condition until quite three weeks later. This may not be altogether an unmixed blessing, as this type of the flower appears to find more favour with many persons, when advantage may be taken of the profuse display which the early sorts are just now making. Nurseries and gardens during the declining days of September and the earlier days of October were quite gay with the wealth of blossoms which most of the early sorts provide the grower with, and the most pleasing character of such displays is the charming variety of colour in which they are now obtainable.

The recent show of the National Chrysanthemum Society included a display of some of the most useful varieties now in commerce, and the class in which the competition was provided stipulated that the blooms should be cut from plants grown in the open air and not disbudded. This appears to be a step in the right direction, and cannot fail to have a stimulating effect in inducing others to take up the culture of the early-flowering varieties. Each of the exhibitors in the class just mentioned staged large bunches of fresh, clean, and freely-grown sprays of blossoms, and those whose business it is to keep up a supply of cut flowers through the early autumn and until the midseason Chrysanthemums are ready for cutting will find in the early sorts a useful class of plants. The severe disbudding, which is the orthodox method of culture practised with the later varieties, apparently does not suit the early sorts. The grace and beauty which characterise most of the early Chrysanthemums when grown freely and naturally seem to be absolutely lost when the same varieties are severely disbudded. Then for the best decorative work, no matter what form the decoration may take, the sprays of buds and blossoms in various stages of development have a charm which the larger exhibition blooms fail to give, and the former also are admirably adapted for the numerous small receptacles which are now so frequently used indoors.

Another most important aspect from which to view the subject under notice is the value of the plant as a hardy border one. For years a certain few enthusiasts have repeated as occasion offered the merit of the early sorts in keeping the hardy border bright and gay during the dull period usually intervening between September and November. The value of their notes was confirmed when the trial of some 141 stocks of early-flowering Chrysanthemums was made in a sunny border during the latter part of May, 1897, by the Royal Horticultural

Society in their garden at Chiswick. It was there acknowledged that the plants “made a magnificent display of bloom, and were greatly admired by visitors to the gardens.” A few varieties commenced to flower in July, a larger number in August, and throughout September and October this extensive trial exceeded in beauty and effect the most sanguine expectations of those more deeply interested. In the parks and open spaces in and around London and many important provincial centres appreciation of these plants has been shown, and instances could be given where puny plants placed in their flowering quarters during May have attained dimensions by the early autumn that hardly seemed credible. It is pleasing to note the increasing variety in the borders each successive season, showing clearly how the interest is deepening. Probably one of the most popular sorts is Mme. Marie Masse, a good lilac-mauve, but becoming richer in colour as the season gets older. This is an ideal spreading and free-flowering plant, and is nice and dwarf, too. A recent bronzy crimson sport, sent out under the name of Crimson Marie Masse, is a good thing, and another season is sure to be largely grown. This is a colour which is needed. Mr. Jones’ group at the Royal Aquarium also included a new sport, this being a kind of rich cream colour, with a salmon-cerise base to the petals. The colour promises to be much better later. Each of these sports is similar in habit and free-flowering to the parent variety. Mme. Eulalie Morel is another excellent sort, deep cerise, shaded gold. Although not so branching and free as many others, it is one of the best. Harvest Home has jumped into public favour this season both in private gardens and for market work. Its crimson and gold colours are much appreciated thus early, but the habit leaves something to be desired. Francois Vuillermet is little known, but its pretty little rosy blossoms, each on a useful foot-stalk, and also so remarkably free and dwarf, stamp it as a most desirable plant for the open border. Sam Barlow can be had at the same date. Its lovely salmon-pink blossoms are always admired, and it is also a profuse blossoming sort. M. Gustave Grunerwald is very fine in certain seasons, and the present season has suited it admirably. The blooms have been large, and the colour a good bright rosy pink. The habit, however, leaves much to be desired. Mychett White has improved since being planted outdoors, the constitution getting more robust, until there now appears to be a prospect of keeping the plants progressing in this direction. I know of no other white flower of the early sorts that has so charmed me with its display as this has done. Grown in a natural manner without disbudding, there has been a display of the most lovely blossoms imaginable, and if this sort can be grown away from the smoke of towns, a large area might well be devoted to it. Lady Fitzwygram, another white, on the other hand, needs to be grown differently. Disbudded to a dozen flowers, the result is excellent, but grown freely, the blossoms are poor and weedy. Mr. Godfrey’s new soft yellow sport when properly grown should prove a useful flower. I do not share the opinion expressed in a recent note that the colour is poor and washy. We need the soft tones of colour as well as the richer ones, and the new one should therefore be grown. Ivy Stark has over and over again proved its usefulness for early work, and although an orange-yellow colour early in the season, this becomes more intense as the season advances, the orange colour at last being most pronounced. An

early Source d'Or is an excellent description of this sort. It is very profuse. Louis Lemaire, the pretty rosy-bronze sport from M. Gustave Grunerwald, has not been so much in evidence this season, but it may be classed as a very useful flower. Queen of the Earlies (pure white) and its new golden-yellow sport, named Golden Queen of the Earlies, are being taken in hand by the market growers. They can be grown on the large bloom principle, or in a natural manner, in which way they are very free-flowering. Their habit is good. Mme. C. Desgrange (white), G. Wernig (yellow), Mrs. Hawkins (richer yellow), and Mrs. Burrell (straw-yellow), all members of the same family, are still largely grown, more particularly the two first mentioned. The stock of these appears to be getting much less robust, and when the plants are freely flowered they are inclined to be weedy, and will not compare with many of the newer kinds.

The above sorts are all Japanese and embrace the leading varieties, flowering usually during September. Those flowering in October may well be considered quite apart from the earlier kinds.

D. B. CRANE.

Highgate, N.

Chrysanthemum Mrs. Hawkins.—Among the early-flowering kinds this is a very useful variety both for its freedom and for its colour. Its weak point perhaps is its uncertain colour, and the way in which it reverts to the older yellow sport known as Mrs. G. Wernig is at times rather perplexing. Even so long ago as when this kind was the subject of litigation a splendid golden variety appeared in my batch, and its identity was vouched for by the firms chiefly interested at that time. The plant was easily distinguishable among its fellows at fifty yards, and the colour being so good and seeing a whole plant had thus sported made me anxious to raise a stock for future use. This I did, and without working the plant to death, as it were, satisfied myself with a few hundreds, a large number of which of course were tops of the earlier-rooted ones. But generally the thing was disappointing at that time and since; so many revert to the original, that it is hardly worth the trouble of separating. Two years since I again selected several dozens of the richest gold, but many of these on flowering were but Mrs. G. Wernig, and some even lighter than this kind. I do not know if the experience is general, but the richer deeper yellow in my case is somewhat later and generally less free in flowering also. Each year one sees the sports and reversions of this group, sometimes a limb, sometimes half a flower, and frequently a whole plant, though so far as I know the sporting has been confined to the yellow shades.—E. J.

Chrysanthemums in Peach houses.—The worst sufferers in consequence of the rage for Chrysanthemums have been Peach trees, Vines, and fruit trees under glass generally. In many gardens there is not half enough accommodation for the hundreds—and in some cases thousands—of Chrysanthemums grown without encroaching on the fruit houses, every inch of border being in many instances blocked up with the plants. I have sometimes seen them set on the bare soil, the pots touching each other, in which case the top 3 inches or 4 inches of the Peach border become, by the time the Chrysanthemums are removed, a soddened mass—the very thing that should be avoided if healthy, fruitful Peach trees are desired. Even where the pots are arranged on bricks, tiles, or boards, the presence of the plants in the house renders the atmosphere stuffy and unhealthy at a time when a free and bracing current of fresh air is needed to harden and mature the wood. All gardeners know well enough that exposure to a moderate amount of frost during November and December is of immense benefit to Peach trees under glass, yet on account of the Chrysanthemum blooms the ventilators have to be closed if frost threatens.

When crowded into vineries at rest the evil is just as great, the Chrysanthemums for the time having the preference. It is the small and medium-sized gardens which suffer most in this respect. In many of the larger establishments there is a special Chrysanthemum house, this being used for a variety of other things during summer. In many more where glass accommodation is limited the erection of a similar structure would be profitable.—B. S. N.

FED VERSUS UNFED CHRYSANTHEMUMS.

A FEW days ago I saw in a town garden a valuable batch of Chrysanthemums, and the house in which they are accommodated lies in a low, damp situation, this fact necessitating great care to avoid wholesale destruction of the blooms by decay in foggy weather. The plants were well clothed with healthy green foliage right down to the pots, yet the gardener assured me that not one drop of liquid or artificial manure had been given. It has been proved that excess in the use of liquid manure produces, it may be, large, but flabby blooms, which inevitably fall a prey to fog and smoke, and the supply for decoration soon comes to an end. The plants in question were growing in pots about 10 inches in diameter, one plant in each, good friable, turfy loam, with good drainage, being the rooting medium. Now that the buds are considerably advanced, a little stimulant will be given. It is pleasing to observe that rigid disbudding in establishments where the flowers are required for cutting is being gradually abandoned, and doubtless it is the stems wreathed with medium-sized highly-coloured flowers which give the best effect when cut. The most serviceable batches of Chrysanthemums I ever grew were rooted at the end of January, pinched once, and confined in pots from 8 inches to 10 inches in diameter. A maure-free loam was given, this being kept open by a little old mortar rubble. No disbudding of any kind was practised nor feeding resorted to until these small pots were crammed with roots. The growth was firm and wiry as compared with that of plants flooded with soot and sheep manure water through the early stages of growth, and I always had plenty of blooms several weeks after my neighbours, who went in exclusively for big blooms. If wanted to flower late, they may be protected in the open with rafters and canvas. Early and excessive feeding is doubtless answerable for a great proportion of blind growths.

J. B. S.

NOTES AND QUESTIONS.

Chrysanthemum Miss Alice Byron.—In this we have a distinct gain in the Japanese section. The blossoms are large, with long, broad, incurving florets of good substance. The habit is dwarf, about 3 feet. Those who know Western King may appreciate the variety under notice, which is said to be an improvement on that excellent variety.—D. B. C.

Chrysanthemum Soleil d'Octobre.—The October show of the National Chrysanthemum Society has again proved the undoubted merits of this lovely semi-early Japanese kind. Most stands contained excellent examples of it, and as it is one of easy culture and also possesses a good habit, it may be classed as a standard variety for October flowering. The blossoms are large, of graceful form, and of a pleasing soft yellow colour. It deserves extended cultivation.—C. A. H.

White-flowered Zephyranthes.—There is a deal of confusion regarding the white-flowered Zephyranthes, two or three names being used indiscriminately. An instance of this occurs in the number of THE GARDEN for September 16, where on page 223 is a charming little cut of Belladonna Lilies and Zephyranthes candida flowering together at Kew. The writer, "E. J.," in referring to Zephyranthes candida (Peruvian Swamp Lily), states quite correctly that it is an evergreen species, or nearly so, the pretty white Crocus-like blossoms appearing in plenty during the autumn months. In continuation, the writer says: "A closely allied species is the Atamasco

Lily (Z. Atamasco). This flowers in spring and has somewhat channelled leaves, while Z. candida has decidedly flat surfaces to its leaves, the latter being also very polished and smooth." All this, except the spring-flowering of Z. Atamasco, is entirely in accordance with "W. W.'s" article on the entire genus in vol. xxxvii., when a coloured plate of Z. candida was given. Next on p. 230 of the same number for September 26 we are told that at the meeting of the Royal Horticultural Society two different exhibitors showed Z. Atamasco, which should surely read Z. candida, but being prevented from attending the meeting, I cannot say from personal knowledge; still, one would not expect a spring-flowering subject to bloom in the middle of September. Z. candida has also before now been labelled Z. tubispatha, which is a far more delicate species.—H. P.

DESTROYERS.

WASPS.

THERE has not been the same outcry against the ravages of wasps this summer as in some recent summers; nevertheless, there have been districts badly infested. Usually they make their appearance in the early part of August. This year none appeared with me until the end of August, but, though late, they have been none the less active, numerous, and destructive. Plums and Pears have suffered severely from their depredations, and the quantity reduced both for immediate use and storing. It is not the amount of fruit directly eaten that gives cause for complaint, but the numbers that are spoilt. The smallest hole made in the skin causes the fruit to decay if a use is not found for it early, and it is curious how soon decay sets in when Apples and Pears are taken indoors to be stored after being pierced by the wasps. Stewing Pears seem quite as attractive to them as dessert kinds—at least two sorts grown here were seriously injured by them. These were Gilgil and Bezi d'Heri. It has been necessary to gather early to save the fruit, and the crop being a light one, the loss is greater in proportion. Destroying the queens in the spring months is, perhaps, the better way to reduce their numbers or stamp them out. Some horticultural societies give prizes for queens at their summer shows—a most commendable practice, worthy of much greater extension. County or parish councils might do something towards this useful practice by offering prizes for queens collected where district flower show societies do not take it up. In some localities there is a difficulty in getting the matter taken up even when a fairly liberal payment is offered. In wooded districts nests are not so easily found. By the end of September wasps had ceased to be troublesome this year, owing to the great change from heat to cold and the frequent showers that followed each other. Wasps do not seem able to withstand cold and wet weather. Although they were so late, they appeared in strong force spontaneously, and they were not so easily combated as I have known them in other seasons by the use of cyanide of potassium. They hatched so rapidly, that unless the nest was dug out promptly a second application was necessary. I find, too, that the cyanide solution should be freshly dissolved as required, and a new stock procured each summer from the druggist. If any reserve supply is carried over from one summer to the next, a perfectly dry place must be chosen and the bottle kept tightly corked; otherwise there is a great loss from evaporation.—W. S.

I do not think that wasps have been so generally numerous this year as during some seasons, which is curious when we take into

consideration the last mild winter and the past summer. Wasps in a vinery are no doubt an intolerable nuisance, and a question that has often been discussed is, what is the best means of keeping them out? It is true of wasps that whenever they commence on any fruit they never leave it so long as there is any left. To lay traps of sweet things, such as a mixture of beer and sugar, is, in my opinion, only a way to encourage more wasps. Thin gauze bags are often sold for protection against wasps, but it is almost impossible to adjust them without marring the appearance of the Grapes. Others, again, recommend hanging sheets of light tiffany over the open ventilators to prevent the pests getting in, but this also prevents the requisite current of air, and the houses get too hot and stuffy. After all, the simplest and best means of protecting fruit of all kinds from wasps is to destroy the nests. My own practice when wasps appear is to set a few boys to scour the immediate neighbourhood in search of the nests during the daytime, and to stick up a small flag close to each. Then at dusk, when the wasps have returned, a man goes round with a can of gas tar. If a little of this is poured into the nests and a clod of earth placed over the hole, no further trouble is encountered. I have destroyed as many as 100 wasps' nests in a few days, and surely this wholesale eradication of the evil is the safest means of ensuring the safety of the fruit.—H. H.

STOVE AND GREENHOUSE.

LINDENIA RIVALIS.

THIS, belonging to the order Rubiaceæ, is a small American shrub of great beauty and apparently very free-flowering. The plant here illustrated bloomed fairly well in the summer of 1898, but the flowers were not very numerous. This summer, however, each shoot was terminated with crowds of buds and flowers, and when the photograph was taken (early in August) it was a very beautiful object, the pure white flowers standing up grandly, the coral tubes being each 5 inches to 6 inches long. The plant has been in bloom four months, and there are still flowers on it (third week in September). It has been grown in a 9-inch pot, kept on the dry side after flowering, and fed liberally with liquid manure when coming into bloom. Thrips have a very decided fancy for its leaves, and have to be continually watched for, or the plant would be soon ruined. It strikes very readily from cuttings.

Sispara, West Hill, Putney.

R. H. B.

Choice room plants.—Whatever may be its fate later in a cool room, at least during the summer in a room looking west a good plant of *Pandanus Veitchi* has done remarkably well for the past summer, and even now that it is colder shows no signs of suffering. If grown where gas is not habitually burned there are several other plants that are charming for rooms. Thus, plants of *Asparagus plumosus nanus* started in warmth, then hardened in a cool greenhouse, will keep singularly fresh and green for six months in a room. Another very beautiful room plant is *Araucaria excelsa*, not large, but well seasoned in ample light and air before being taken indoors. Several of the smaller-leaved *Crotons* and *Dracenas*, and, not least, the fine-leaved *Begonias* do admirably also, retaining their fine colour and foliage for a long season.—A. D.

Carnation Reginald Godfrey.—I would advise those who grow winter-flowering Carnations to give the above variety a trial, as I hear from a reliable source of its excellency. All will admit that Miss Joliffe when well grown is an excellent Carnation, as it is a very free bloomer and the lovely pink shade appreciated. It was said that Mme. Teresa Franco would supersede it, but those whose aim is to fill the basket have

found it barely worth growing. Reginald Godfrey is said to be equally as free both in habit of growth and flower-production and more easily grown, as it is not everyone who is regularly successful with Joliffe. If this be so, this comparatively little-grown Carnation will prove an acquisition. Although I cannot speak from experience of the value or otherwise of the system, I have heard of tree varieties being propagated in spring, planted out in May in frames or pits, I presume, and lifted and potted in September, excellent all-round results being thereby obtained. At any rate the plan is worth a trial, and for my own part I cannot see why it should not answer, as in the case of *Bouvardias* and similar things.—C.

Hibiscus Manihot.—In your issue for February 9, 1898, appeared an excellent coloured plate of the above-named beautiful plant as flowered in the new Mexican house in the Royal



Lindenia rivalis. From a photograph sent by Col. R. H. Beddome, *Sispara, West Hill, Putney.*

Gardens, Kew. In the spring of this year Messrs. Sutton offered seed of a plant under this name, which doubtless was bought by many in the expectation of getting the fine plant portrayed on THE GARDEN plate. In this expectation, however, they were disappointed, as the plants when they bloomed (as they are now freely doing in pots in the greenhouse of a friend of mine) produced flowers of the same colour, but about half the size of those represented. The plant is, however, nevertheless, apparently correctly named, as there seem to be no less than three varieties of *Hibiscus* named *Manihot*. One, of which a coloured drawing is given in volume 41 of the *Botanical Magazine* on plate 1702, had flowers of a much deeper shade of yellow and about the same size. In the second, with the additional name of *pal-matus*, figured in volume 59 of the same work, on plate 3152, the flowers are exactly those of the plant raised from Messrs. Sutton's seed. A coloured plate for a forthcoming number of the *Botanical Magazine* has been prepared of the Kew variety, and when that appears Sir Joseph Hooker will doubtless give it some further distinctive

name to distinguish it from its brethren mentioned above. This last-named fine species is not suitable for pot culture; whereas the other two apparently are.—W. E. GUMBLETON.

Forcing Solomon's Seal.—This is very useful for the embellishment of the greenhouse in early spring if the plants are forced gently into bloom, as the long arching shoots studded with their small drooping blossoms form an exceedingly pretty feature. They are generally seen with several spikes in a pot, to obtain which established plants are lifted in the autumn from the open ground and divided into single crowns, selecting only those for potting that are stout enough to flower well, the others being planted to yield a supply the following season. These selected crowns may be grouped in any way that is likely to be useful, about half a dozen spikes in a pot 6 inches or 7 inches in diameter being convenient for general purposes. The forcing must be gradual, as if too much heat is used the spikes will be weak and greatly inferior to those brought on gently. If possible, home-grown crowns should be chosen for forcing, as many dealers often supply them too weak to flower in a satisfactory manner, while more than once I have seen the smaller and much inferior *Polygonatum officinale* sent instead of the true *Solomon's Seal* (*Polygonatum multiflorum*).—H. P.

Curcuma Roscoeana.—This is remarkable for its attractive blossoms, which are very distinct from most other subjects, unless it be some members of the same genus. Its usual season of blooming is towards the end of the summer and in early autumn, but still it occasionally flowers earlier. The foliage is decidedly ornamental, not unlike that of a *Canna*, while the flower-spike is pushed up independently of the leaves. The blossoms are arranged on the upper part in a cone-like head, but it is not the flowers themselves that form the choicest portion of the inflorescence, but the large lip-like bracts which partially hide them. These bracts are of a reddish orange tint and retain their beauty a considerable time. There are several species of *Curcuma*, but this is one of the best known, though even now it is rarely seen. Except one or two which occur in Australia, the *Curcumas* are all natives of the East Indies. They need a period of rest during the winter, at which time they should be kept moderately dry without being actually parched up, then on the return of spring the tubers should be shaken clear of the old soil and repotted in fairly light compost. The *Curcumas* are essentially stove plants.—H. P.

Rust on Carnations.—This disease is, perhaps, the most troublesome when it attacks the leaves, because it is often unseen if the grower be but a casual observer.

Grappled with in its infancy, there is little danger to be feared. The rust may be noticed by small blotches mostly on the outer portion of the leaf. These blotches eventually burst and send out numberless spores which obtain a hold on other leaves, and in their turn spread. Some sorts are more liable than are others. The plan then is to watch the plants closely, and if tiny brown specks are seen, cut away and burn the affected part at once. If in pots, isolate such plants and go over them daily. That a collection containing some thousands of plants can be kept absolutely clear of this disease is proved, even if at one time and another badly infested specimens are imported into it. Such a collection is that of Mr. F. A. Wellesley, Woking, who regards this rust with something akin to horror. That he is well rewarded for this continual watchfulness is certain, the healthy, clean-leaved young plants being a picture in their way, and they will give the owner an infinite amount of pleasure throughout the dull winter months. This disease is different from the ordinary black spot, which is brought about by moist surroundings. To prevent this, a second trouble, the aim

should be to keep everything about the plants as dry as possible and airy. If in frames it is well to raise them, so that air may pass underneath, and also see that there is no drip inside from the glass.—H. S.

Amasonia punicea.—During the autumn months this is seen in its most attractive state, while a very desirable feature is the length of time over which the beauty of its inflorescence extends. It is a somewhat upright-growing plant of a shrubby character, whose toothed leaves are from 8 inches to 1 foot long, while the spikes of flowers are longer than that. The blossoms themselves are tubular and of a pale yellow colour, but they play a minor part in the embellishment of the plant, by far the most important being the leaf-shaped bracts which accompany them, and which remain bright for such a lengthened period. The largest bracts are situated at the base of the spike and they gradually lessen in size to the top. They are of a bright red colour, a very attractive tint, and a few well-flowered examples are particularly valuable for grouping purposes. It is not at all a difficult subject to cultivate, succeeding as it does with the treatment given to the general run of stove plants. Like *Acalypha hispida*, this *Amasonia* seems to have been known to a certain extent for many years previous to its introduction. It is a native of a considerable district in Tropical America, and was first introduced and distributed by Messrs. Veitch about fifteen years ago.—T.

Rhododendron retusum.—The name *Rhododendron* suggests comparatively large, showy blossoms, but this is quite an exception to the rule, the plant altogether being decidedly unassuming, though wonderfully pretty when in bloom. It forms a neat, freely-branched bush clothed with small deep green leaves, which when young are prettily tinged with red. The flowers, which are often produced in the autumn, are different from those of the other *Rhododendrons*, suggesting rather an affinity to some of the *Fuchsias*, the colour being nearest to that of the distinct *F. triphylla*. *Rhododendron retusum* is a native of Java, but will hold its own in a lower temperature than the other species from that region; indeed, it will succeed in an ordinary greenhouse. It has not been much employed by the hybridist, the only varieties in which it has played a part as far as my knowledge extends being *Prince of Wales*, sent out in the early sixties by Messrs. Rollisson, and *Daviesi*, which was obtained by the late Mr. Isaac Davies, of Ormskirk, by the intercrossing of *R. retusum* and *R. javanicum*. The flowers of *R. Daviesi* are in size about midway between the two, and its glowing orange-red flowers are very showy, but it seldom makes a shapely plant, and often fails to grow in a satisfactory manner.—T.

The Scarborough Lily (*Vallota purpurea*).—Two or three times recently attention has been directed to the present neglect of this beautiful old bulbous plant, whose brilliantly coloured blossoms were at one period so universally met with. It might be supposed that as large numbers of bulbs are sent to this country from South Africa every year it would become far more general, but this very circumstance, I think, militates against its popularity, as there is a considerable mortality among these imported bulbs, and many of them regarded from a flower point of view are inferior to the old type, at one time so common in gardens, being taller, with in many cases more starry blooms. The South African bulbs generally reach this country in a dormant state during July and August, and if potted at once and kept fairly dry during the winter, some of them will usually flower in the spring. The change of seasons is of course accountable for this. I have found a considerable amount of variation among these imported bulbs, not only in the shape of the flower, but also in the colour thereof, for while some are richly tinted, with occasionally a whitish eye, there are a few with blossoms of a pink or salmon-pink tint, while I have also heard of a pure white form, but have never yet seen it. With regard to imported bulbs, the mortality seems to arise from

an internal excess of moisture, and however dry they may be kept, many bulbs perish from this cause. Even if they grow and flower it is difficult to get them permanently established after the manner of the old-fashioned form. Like many other bulbous plants, *Vallotas* will stand for years in the same pot and flower well every season, even when the bulbs are closely packed together.—T.

Forcing our native Viburnum.—The *Lilacs* are of all the shrubs that bloom in the spring the ones most commonly forced for the sake of their flowers in winter, and next to them for this purpose comes the *Viburnum Opulus*, a graceful shrub with very white, globe-shaped heads of bloom, to which it owes its popular name of Snowball Tree. The species of this family are very many, and are remarkable for the dimensions of their heads; some, indeed, like *V. O. macrocephalum*, originally brought from China by Fortune, produce heads equalling in size those of the *Hydrangea* at least. What hinders cultivators from forcing these shrubs for the adornment of the house in winter would seem to be an ignorance of the means of increasing them. The plants are generally obtained by slips or budding, but grafting under a bell-glass in the spring is an easy and successful way of propagating the finest varieties. Put in the ground they produce in a few months some very pretty plants, which admit of very easy forcing. These plants are the more sought after because so long in bloom, and it is by no means rare to see bushes not more than 20 inches high with upwards of thirty heads upon them. Forcing is an easy matter in the hothouse, given plenty of light and air. The gardener who knows his business takes care to remove the extremities of the branches on placing the plants in the hothouse, as the flower-buds will then develop better. As soon as blight appears, copious syringings with rain water should be given, and even tobacco water in case of need. Before removing the plants to the dwelling-house they ought to be kept for some days in a rather lower temperature than that in which they were forced. Plants so forced are not lost, and if well pruned after flowering, in three years time can be forced anew.—*Revue de l'Horticulture Belge*.

PEAT-MOSS LITTER.

TO THE EDITOR OF THE GARDEN.

SIR,—Doctors differ, and so it appears do gardeners. In your issue of September 30 is published a short, but scathing article from "H. H." on peat-moss litter, and in reply I beg to offer you my experience of this material. I have used it now for twelve years, and at the present day I use no other manure. I make all I can and the rest I buy. I therefore am unable to pity the poor gardeners who are obliged to use it or none at all. I can only envy them if they can get all they want for nothing. "H. H." contends, "That compared to good straw litter manure it is not worthy of the name. In itself the manurial properties are very small. After lying in the ground a whole season it turns up in the same condition as when dug in. In bog peat nothing grows naturally to any perfection. It is unfit to mulch Strawberries with," &c. Now my experience is that it is infinitely better, stronger and more lasting than the best stable manure. It cannot help being so if properly treated, for it contains all the droppings and all the urine, which straw litter does not. The manurial properties before being used are probably small, but what would be the manurial properties of unsoiled straw? Straw is a very bad sponge and moss litter is a very good one. The former drains, the latter absorbs. The result is obvious. I believe that many things will grow in bog peat when drained. Peat-moss litter is drained and dried, and it will grow many

things. It is certainly unfit to mulch Strawberries with; but that is not the fault of the material, but of the man who uses it without thinking. One may occasionally find a large lump that has not rotted, but this lump has given its essence to the earth and has helped to keep the soil open and moist, which is a benefit not to be ignored, particularly in heavy soil like mine and in such seasons as we have had for the last three or four years. But there ought not to be any large lumps, and the place for moss litter in the majority of cases is not in the top spit, but forked liberally and roughly into the second spit. For grass land it is excellent, but it should be spread straight out of the cart, and not be left in heaps till Hodge has time to spread it. It is too strong to be left in heaps. On the surface it is excellent for *Begonias*, *Pansies*, *Lilies of the Valley*, and many moisture-loving plants. My interest in peat-moss litter is limited to gardening, and I am prepared to prove all I have advanced to "H. H." or anyone else who will come and see for himself.—J. WHITWORTH SHAW, *New Place, Lingfield*.

—I quite agree with "H. H." with regard to this material. There is no doubt it is one of the worst nuisances a gardener has to contend with, for though it would seem that by its nature it would be useful on heavy soil, in reality it is not so, while on light soils it is worse than useless. I used to have to deal with tons of it, and have tried laying it by for months with lime and oddments of soil, but all to no purpose.—H.

PROSPECTS FOR WINTER.

In the kitchen garden there has seldom been a season when prospects for a good all-round supply of vegetables looked better than now, for though there has been ample growth on most things of a green nature, the dry, hot weather early in the autumn and the cool, though dry, weather now prevailing have, in this neighbourhood at least, made this growth hard and sturdy and less likely to fall a prey to severe frosts later on should these occur. A hard winter would not be an unmixed evil this year, for since the memorable one of 1894-95 there has been no severe or long-continued frost, and a consequence of this is a great increase in certain garden pests, notably caterpillars of various kinds, slugs, and wire-worm. Brussels Sprouts and winter and spring Broccoli, Kales, and different winter greens all look hard and likely to stand well, while the same is true of salading plants generally, such as Cern Salad, Endive, and Lettuces. Roots, such as Parsnips, Carrots, and others, are showing that their season of growth is past, and the outlook is good, for almost every root lifted is clean and well developed already, and they will be well finished by lifting time. Potatoes are not only a good crop, but of excellent quality. I lifted a few perches of *Magnum Bonum* that were on land required for tree planting, and was surprised at the number of fine, well-shaped tubers. One root had just over 9 lbs. of good saleable Potatoes besides a few trashy ones, and when *Magnum Bonum* crops like this there are few more profitable varieties. Artichokes are almost entirely free of disease this year, the result of a couple of doses of old, dry soot and sulphur thrown over them on damp days in spring.

The fruit room, unfortunately, will have no such satisfactory tale to tell. Birds have played sad havoc with the few Pears left on the trees to ripen properly, while Apples are conspicuously absent. The trees of all kinds are, however, in a very promising state, and the rather heavy showers we have recently been favoured with have all been in their favour. Young Apple and Pear trees have splendid clean-looking wood bristling with fruit-spurs, and foliage of that hard, leathery character that all fruit growers like to see. The leaves, in short, look finished and the buds prominent and hard to the

bases, so there is every probability that next season the trees will be as fruitful as they are barren this year, unless, of course, weather of a very unkind character occurs next spring. H. R.

Suffolk.

TREES AND SHRUBS.

OLD OLIVE TREES IN MAJORCA.

IN the equable temperature of the Balearic Islands vegetation of all descriptions flourishes. In the town of Palma, with its fine old cathedral, many houses are in mid-April sheets of rosy lake with the blossoming Bougainvilleas. In the thirteen-mile drive from the town to Miramar, the picturesque seaside estate of the Archduke Luis Salvator, every available inch of ground is cultivated. Almond trees of large size occur in extensive plantations, bearing towards the end of April nearly full sized fruit. Beneath the spreading branches, vegetables, such as Cabbage, Cauliflower, Cos Lettuce, Onions, and Broad Beans, are grown, while at that season of the year Barley and Oats are in ear and in many places rapidly yellowing. Here and there are small walled plantations of Prickly Pear (*Opuntia*), and as the distance from Palma increases, large Fig trees and Karoubas or Locust trees (*Ceratonia siliqua*), which bear the Carob Beans, to a certain extent replace the Almonds. Further on, toward the end of the level country, and just previous to the road entering the pass that threads the range of precipitous hills which divide the plain of Palma from the slopes of Miramar, a particularly interesting sight meets the view, for here on either side of the road stretches a wide plantation of Olive trees, evidently very old. The age of the trees is popularly supposed to be a thousand years, but all record of their planting has naturally been lost in the dim vista of bygone centuries. On every side stand the fantastic ruins of these time-worn veterans, many of them possessing but little semblance to trees. Now and again the remains of a giant trunk would consist of nothing but from six to a dozen gnarled and contorted sections of the outer layers of the trunk and bark, from 2 feet to 4 feet in circumference, whose serpentine coils, in the absence of the central wood, resembled huge cables, covering at their bases a circumference of several yards, and which thickened and met again at a height of 12 feet or 15 feet, a mere distorted skeleton of what was once a solid trunk. So quaint and grotesque were the forms assumed by many of these hoary patriarchs, that a couple of hours might well have been spent in selecting subjects for the camera, but such a delay *en route* for Miramar being out of the question, I was forced to be content with two photographs taken not far distant from the road, one of which is reproduced in the accompanying illustration. The tree on the left was one of the largest in its immediate neighbourhood, its bole measuring about 40 feet in circumference at the ground level and in an excellent state of preservation compared with many of its adjacent comrades. When these aged trees were first pollarded it is impossible to say, but, as may be seen in the illustration, a few comparatively youthful fruiting branches still spring from the misshapen trunks, which are subjected to an heroic method of pruning, branches thicker than a man's thigh having been evidently sawn off many of the trees shortly before my visit, while some of the most distorted wrecks were

denuded of all their branches except one or two barely as thick as the forearm. All the older trees in Majorca Olive plantations are pollarded, but the younger are apparently allowed to make less restricted growth. The ground beneath the trees was being worked in places by very primitive ploughs consisting of a metal share fixed to a beam, which was elongated into one short handle, the implements in question being drawn by a pair of oxen. Large heaps of manure, chiefly animal, had been collected in parts of the plantation, from which it appeared that the necessity for well fertilising the ground was appreciated in Majorca.

S. W. F.

Hibiscus (Althæa) cœlestis.—Many of the double forms of *Althæa frutex* are of a poor and

now when the leaves are changing colour. Though some individuals even of the same kind, owing to position or other circumstances, vary considerably in their autumn tints, the neat-growing variety with small or medium-sized leaves is usually the brightest of all, while that with large, deeply-lobed foliage generally dies off more or less tinged with brown, and is therefore dull and sombre compared with the other. Just now a large quadrangle at Kensington Palace, which has three of its sides more or less densely clothed with this *Vitis*, presents a most interesting and delightful feature, owing to the numerous tints represented in the masses of foliage. Different shades of green occur, from a light tint suggestive of spring to a deep olive hue, and from that to bronze and bronzy crimson, till a bright glowing crimson is reached, which is in the sunniest spots lit up by leaves of a vivid scarlet tint. A vigorous plant of the small-leaved form has



Old Olive trees at Majorca. From a photograph by Mr. S. W. Fitzherbert, Torquay.

undecided colour, which takes away from their value as late-flowering shrubs. The new variety mentioned above has no such fault, and when seen grouped as I saw it a few weeks back at Gunnersbury House it forms quite a charming feature in the garden. The flowers are very large, single, and salver-shaped, almost true blue in colour, and with a rosy purple base. They are very freely borne, and the plants had a freshness about them that made one think of spring rather than autumn. It only needs a few such showy varieties as this to make these hardy forms of *Hibiscus* very popular for the shrubbery. The aim of the raisers should be to develop large-flowered single instead of double forms.—J. C. TALLACK.

Vitis inconstans.—There are certainly several forms of this charming climber, and while their distinctive features are very apparent from spring to autumn, they are particularly noticeable just

mounted to the top of a high wall from which it droops in a dense fringe, the long, cord-like shoots being clothed with a profusion of small, neat leaves, which, owing to their full exposure to the sun, are of a uniform scarlet hue.—T.

Caryopteris mastacanthus.—This shrub well deserved the award of merit given it at the meeting of the Royal Horticultural Society on September 26, but it surely is not entitled to be spoken of as a recently introduced shrub, as was lately done in *THE GARDEN*. It was first sent from China by Fortune in 1844, then lost after a time, and reintroduced by Maries when travelling for Messrs. Veitch in 1879 or 1880. It was soon widely distributed and obtainable at a cheap rate from many nurseries. A hot season and a sunny position suit it best. It cannot in a general way be considered quite hardy even near London, but succeeds best at the foot of a south wall or in some similar spot. This *Caryopteris* usually dies

nearly to the ground during the winter, but it breaks up freely and flowers in the autumn. It is one of the few shrubby members of the Verbenaceae family that are fairly hardy in this country, most prominent of the others being *Clerodendron trichotomum* and *Vitex Agnus Castus*. The flowers, borne in rounded clusters from the axils of the upper parts of the shoots, are of a bright purplish blue tint, while the value of the plant is still further enhanced in that it blooms in the autumn.—H. P.

BOOKS.

MORE POT POURRI.*

WE are glad again to welcome our beloved Mrs. Earle, with her varied basket of good things; she is so sympathetic with all kinds of good work, and a real gardener. The great success of her first work has led her to give us another instalment. The best idea, perhaps, we can give of the book is to quote a few examples of the pot pourri from it. Such a brilliant success naturally carries its own lessons to author and publisher; but we almost wish that, as there is so much that is charming about young women and children, the book had been called "Women and their Babies." She tells us of the deplorable effects of the popular evergreens in Italian gardens, and she is quite right:—

Italian gardens.—The villas of the rich that I saw round Florence—and, of course, there are a great many which I did not see—are to be recognised by the fact that the Vine and Olive, Lemon and Pomegranate, Fig and Mulberry, are turned out for the planting of Laurels, Deodars and other conifers, Rhododendrons, and coarse-growing, unpruned shrubs. The beautiful old walls are often levelled to the ground to make a slope of coarse-growing grass, or the wall formerly used for the trained and well-pruned Vine is smothered with a mass of untended creepers. The newly-planted Crimson Rambler is doing very well and making excessive growth, though it will never be a general favourite, as it flowers too late and is not a marketable Rose; so the gardeners despise it, which is lucky, as its colour is not good. The greatest crime of all as regards the spoiling of Italian gardens is destroying the effect of space and coolness, and at the same time entirely shutting out the view by planting trees—say, even a row of Poplars. The old gardens as perhaps Dante and Boccaccio saw them are now smothered in Virginia Creeper, and made to look as much like a villa at Hampstead or Putney as possible. Magnolias are crowded out, and Camellias seem no longer cultivated (I suppose, because they are out of fashion in English conservatories); and instead of the cool grey gravel, so easily kept raked and weeded in the old days, unsatisfactory grass paths are attempted. In the garden that I especially remember, having spent months there twice in my life, the view towards the city and the Val d'Arno right away to the Carraras—which on favoured evenings are rubies or sapphires or beaten gold against the sky—all this, so ineffaceably impressed on my memory, is now hidden from sight by a dark, gloomy, tangled mass of evergreens.

Mixture for killing Carnation disease.—When in Germany I was much struck by a greenhouse full of the healthiest Tree and winter-flowering Carnations I have ever seen. The gardener told me that the secret of the entire absence of injured leaves and spots from rust was that from July onwards, whether they are in pots or planted out, he syringed them once a week with the following mixture, which is also good for many other plants that are often blighted, especially Hollyhocks and Madonna Lilies:—

(1) Two pounds of vitriol (copper); (2) four

pounds of lime, fresh slaked; (3) twenty-seven gallons of water; (4) two pounds of sugar. (1), (2) and (3) should be mixed together till no longer blue, but clear. Then mix the sugar with the rest. Syringe with an insecticide every week in the early afternoon. The syringing should be done quickly and finely. The ordinary garden syringe with a fine rose does quite well.

Bordeaux mixture.—Here is the real Bordeaux mixture, slightly different from the last recipe, used throughout the whole of France against the phylloxera on the Vines; it is also a cure for the Potato disease:—

Dissolve three-quarters of a pound of carbonate of copper in a little warm water; place it in a vessel that will hold six gallons of water. Slake half a pound of freshly-burnt lime and mix it with the water so that it is about the thickness of cream. Strain it through coarse canvas into the solution of copper. Then fill up the vessel with water.

With these two recipes it seems to me possible to try endless experiments on plants in any way affected by disease or rust. I shall certainly try it on *Humoea elegans* when the plants begin to go off. For a few years I gave up growing this charming annual, the disease always making its appearance.

There is a little heresy here and there—from our point of view, of course—and we feel sure the Maple "recipe" would spoil many a garden.

Maples in the garden.—A well-planted white variegated Maple ought to be in every garden, but it should not be allowed to get large and coarse. A contrast should be planted near it in the shape of broad-spreading leaves of some strong-growing, dark-foliaged plant.

Coltsfoot in the garden.—The bright yellow flowers of the improved Tussilago (Coltsfoot), sold by Cannell, are now just coming out, and the gravelly corner where they grow is a bright mass of buds. These flowers that come before their leaves, like the autumn Crocus, are attractive, though the size of their leaves when they do come puts one sometimes out of conceit with them, especially if crowded for room; though it is astonishing how corners can be found in even small gardens for all sorts of things if one gives the matter constant attention. Having everything under one's eye, one never forgets to notice how they get on; the greatest danger for the beds and shrubberies is the forking over in autumn. It is far better left alone if it cannot be done with care and knowledge.

The worst of such introductions to the garden is, that getting them out is not at all so easy as getting them in.

Can Mr. Geo. Muirhead, or any bird-lover among our readers, tell us more about the little owl to which the following verse of Shelley refers? It is quoted by Mrs. Earle.

Sad aziola! many an eventide

Thy music I had heard

By wood and stream, meadow and mountainside,
And fields and marshes wide,—

Such as nor voice, nor lute, nor wind, nor bird

The soul ever stirr'd;

Unlike, and far sweeter than them all.

Sad aziola! from that moment I

Loved thee and thy sad cry.

Pumpkin soup.—Here is a true French recipe for Pumpkin soup. Cut up the slices of Pumpkin (say, about half a large one) and boil them in water. When well cooked, strain off the water and pass the pulp through a sieve. Boil half a pint of milk, add a piece of butter, very little salt, and a good tablespoonful of castor sugar. Pour this boiling milk on to the Pumpkin pulp. Let it boil a few minutes. The soup must be thick, and small fried crusts should be sent up with it. This recipe is enough for two people. Dried Vegetable Marrow is not supposed to be so good, but I had some soup to-night prepared exactly in the same way from a large dried Vegetable Marrow,

and it was excellent, though it had not quite so much flavour.

Nature best at last.—Nothing, I think, tempts me so much to neglect all duties and to forget all ties as gardening in early spring weather. Everything is of such great importance, and the rush of work that one feels ought to be done without a moment's delay makes it, to me at least, feel the most necessary thing in life. A friend wrote to me once: "The best thing in old age is to care for nothing but Nature, our real old mother, who will never desert us, and who opens her arms to us every spring and summer again, warm and young as ever, till at last we lie dead in her breast."

While thoroughly recognising and realising the charm of the first "Pot Pourri," I feel bound to confess, after reading Mrs. Earle's new book, that with pot pourri, as with many other things, one can have too much of a good thing. No doubt there are many grains of gold scattered amongst the heterogeneous notes that come pell-mell from lands far and near about habits, ways, life; about gardens, flowers, pictures, housekeeping, cooking, and admonitions to young and old. Without any continuity we move from thought to thought. Beside an Italian translation of "Hark! my soul, it is the Lord," we find a recipe for cooking Zucchini, a small sort of Cucumber one gets abroad. We descend from Newman's delightful description of an ideal garden—

By a garden is meant mystically a place of spiritual repose, stillness, peace, refreshment, and delight

—to discussing the merits and qualities of separated milk and the advantages of living on a non-meat diet. After perusing a most useful list of Irises, giving the different times at which they bloom, we pass on to a recipe for varnishing plaster-casts which was used by Sir Edward Burne-Jones—

Quarter of an oz. of gum elami, 2 ozs. white wax, half a pint of turpentine; add a small squeeze from an oil-paint tube of raw umber when a small quantity of the varnish has been poured into a saucer ready for use. Apply with a brush, and spread quickly and evenly. This has to be done three times, with a day between each coating, and rubbed hard with a silk handkerchief between each painting. It gives casts and plaster figures the colour of old ivory, and makes them useful and decorative in a way they can never be without it. The varnish on the casts lasts for ever, never becomes dirty, and the dust can be rubbed or even washed off quite easily.

The great use of a book like "Pot Pourri" is in collecting for us interesting scraps of information taken from various sources. How often do we come across charming, quaint, or instructive notices in the daily papers, or various reviews, which pass from our minds because we do not know what use to make of them or where to store them for possible reference.

In speaking of *Tropeolum speciosum*, which has become such a favourite of late and may be seen in every garden, our authoress tells us

That the great secret is digging the holes quite 4 feet deep, filling them up with leaf-mould and the light earth, or planting the roots a foot below the surface, and then they have 2 feet of loose soil to work down into, &c.

In instructing us about the secret below ground she omits the secret for the growth above ground, and that is by letting the creeper grow up a piece of garden netting stretched between two poles, which enables the plant to sway in the breeze and lets the air and sun play freely round it. Against a wall it shrivels and withers for want of the freedom it gets in its native state growing on loose hedges.

* "More Pot Pourri from a Surrey Garden." By Mrs. C. W. Earle. London: Smith, Elder and Co., 15, Waterloo Place.

Many of the cooking recipes are excellent; some are taken from Mrs. Rondell's good cookery book and some brought from foreign countries. How nice it would be if some of our English cooks would take some of these foreign recipes to heart. We all enjoy "Spaghetti" when we have it in Italy, and yet how few of us insist on our cooks making it in England. Again, "Timbale Napolitaine" is an excellent dish, and so is "Asparagus salad."

The advice to young men and women at the end of the book is of that character that depends so entirely on the individuality and circumstances of those concerned, that no general law can be laid down, and though it may be of interest to the world at large, it cannot be considered very original in thought or helpful to young men and women who may be in doubt and difficulty about the crucial facts of life.

M. C. D.

VEGETABLES FOR EXHIBITION AND HOME SUPPLIES.*

MR. BECKETT is a most successful grower of vegetables, and is equally capable of conveying his experience and practices in a concise, lucid form. In the book under notice he has given much sound advice, and, if the truth must be told, has omitted details that a learner would have been glad to have found noted. For instance, why did the author fail to give approximate dates for sowing such kinds of vegetables as Beans, Peas, Lettuces, Turnips, and the like, with a view to having the produce at its best just when wanted for exhibition? It is to be hoped that when he is called upon to produce a new edition this omission will be rectified. I would also point out that original illustrations, a few of which are given, are much to be preferred to a greater number of catalogue blocks, with which most of us are already tolerably familiar. It also occurred to me as I read the book that some of Mr. Beckett's methods are, to say the least, somewhat extravagant, and either uncalled for or beyond the imitation of the majority of his readers, who have neither the time nor the wherewithal to expend. I will give a few instances of what I consider extravagances. On page 57 brief hints upon forcing Carrots are commenced, and this is the kind of compost thought necessary for the frames, or, what are preferred by the author, heated pits:—

Fresh soil should be used for each sowing, a compost of a variety of stuffs such as old potting soil, road grit, old mortar rubbish, peat, well decayed leaf-soil, and light sandy loam in about equal proportions suiting them. To every fifteen barrowfuls add one of wood ashes and a half bushel of bone-meal, passing the whole, which should be well mixed, through a quarter-inch sieve and kept at this season in as dry a state as possible. In the bottom of the pit place a layer of 3 inches of old Mushroom bed manure, and place the mixture on the top to the depth of 18 inches at least, and make moderately firm.

Not satisfied with this, we are further advised to top-dress after the plants are freely thinned out with finely-sifted Mushroom bed manure, and to give occasional slight applications of some artificial manure, which should be thoroughly watered in. Further extravagances occur when advice is given as to growing long-rooted vegetables on soils unfavourable to the production of faultless specimens. The old-fashioned plan of forming deep holes and filling them with suitable compost is recommended, but why make them so deep or far apart? Thus for Beetroot, the holes, according to Mr. Beckett, should be 15 inches apart in rows 18 inches apart, and he formed 4 feet deep; for Carrots, 13 inches apart and 3 feet deep, and for Parsnips 20 inches apart, 2 feet from row to row, and 5 feet deep. I readily admit that Mr. Beckett exhibits perfect Beet,

Carrots, and Parsnips, but surely he could do equally as well if the figures I have given were considerably reduced all round. He rightly protests against coarseness in vegetables generally, but in my opinion recommends practices that in most cases would lead to the production of vegetables much larger than desirable.

The chapter devoted to the preparation of the ground is all too brief, and the writer having had such good experience in various parts of the country might with advantage have advised upon the special treatment different kinds of soils need. He is a great believer in deep cultivation, but a little too emphatic, as witness the following:—

Like everything else worth doing, trenching requires to be thoroughly done; many advise keeping the bottom spit at the bottom, especially should this be of bad quality, but this practice I do not agree with, and always insist on the bottom spit being brought to the top to be acted upon by the weather and the surface-dressings.

The first garden I was connected with was thus treated at the outset, and it was a case of 6 acres of land spoilt, re-trenching only partially getting rid of the "horrible clay" first brought to the surface. Much good advice is given as to preparation of vegetables for exhibition, with hints upon packing and staging the same, the chapter ending with a hint that ought not to be lost upon some growers who frequently mar miscellaneous collections by the addition of faulty produce, which, as Mr. Beckett remarks, simply increases the number and also certainly reduces the chances of obtaining honours. All kinds of vegetables are treated upon, culture under glass and the production of ordinary outdoor crops receiving a fair share of attention, while the selection of varieties must be regarded as thoroughly reliable. To Onions are devoted several pages, Mr. Beckett evidently making a speciality of this crop, and which he is invariably most successful with. He is equally enthusiastic with Peas, and evidently takes great pains in their production over a long period of the year. Nor does he overlook the value of Maize or Indian Corn as a summer vegetable. In dull, sunless summers this crop, according to my experience, is a failure in this country, but given a comparatively hot and dry summer it succeeds admirably and is a fairly good substitute for Peas, the latter, as it happens, failing in seasons that suit Indian Corn. According to Mr. Beckett,

A sheltered, sunny spot should be chosen for Indian Corn, and this ought to be thoroughly manured and trenched during winter, leaving the surface as rough as possible till spring. The seed should be sown about April 15, thinly, in boxes, in heat, and be made quite secure against mice. The young plants are very tender, so care must be taken to properly harden them off in cold frames before planting out, which should be done towards the end of May. The ground should be pricked over and made fine, after which plant in rows 3 feet apart and 18 inches from plant to plant. Abundance of water must be given at the roots during dry weather, and frequent hoeing to promote quick growth. A sowing may also be made the last week in April. The seed should be planted with a dibber and buried 3 inches. It is advisable to plant just as thick again as it is intended to grow them, thinning out when large enough to the proper distance. Some of this sowing may also be transplanted if required, but the practice of sowing under glass is much to be preferred. The cobs of corn should be gathered when fresh and green, and when well grown it is surprising what a large quantity a small piece of ground will produce.

A calendar of operations in the kitchen garden and a short chapter on the enemies of vegetable crops, including their life history and a few good remedies, are given at the end of the book.

W. I.

The weather in West Herts.—A cold week, more particularly at night. On six consecutive nights the exposed thermometer showed from 2° to 7° of frost. The difference between the night and day temperatures has been very great, and on the 10th amounted to 34° in the thermometer screen. This, with one exception, is the greatest difference I have yet recorded here in any day in the month of October. At both 1 foot and 2 feet

deep the temperature of the soil is at the present time about 1° colder than is seasonable. No rain at all has fallen during the last six days, but in the previous six days nearly 2½ inches of rain fell—equivalent to nearly twelve gallons of water on each square yard of surface. During the last four days the sun has shone brightly on an average for nearly 7¼ hours a day. Throughout the week the atmosphere has been remarkably calm, the mean rate of movement at 30 feet above the ground amounting to little more than a mile an hour.—E. M., *Berkhamsted*, October 13.

The days have been mostly warm during the week, but low temperatures have prevailed at night; indeed, since the month began there has been only one night which has been in any way unseasonably warm. On two nights the exposed thermometer showed 6° of frost. Both at 1 foot and 2 feet deep the temperature of the ground is now 1° below the October averages for these depths. During the last fortnight rain has fallen on only one day, and then to the depth of but about a tenth of an inch. No measurable quantity of rain-water has come through either percolation gauge for three days. The sun shone brightly for 6½ hours a day during the week.—E. M., *Berkhamsted*.

NOTES OF THE WEEK.

Aster N.-B. densus.—Among the dwarf Michaelmas Daisies this is, perhaps, one of the best coloured, though not of the largest size. What is not forthcoming in size, however, is made up in numbers, and the plants are a veritable sheet of fine blue. It is in this particular one of the most acceptable of this section. It is 2½ feet high.

Aster N.-B. lævigatus.—This charming kind with a maximum height of less than 2 feet should be in every collection of these plants. Indeed, if half a dozen only were grown this should be one of them. The mass of rosy lilac blooms and the dense, dwarf habit render it not only a perfect plant for the flower garden, but a most serviceable one for pot culture also.

Solanum melongena.—In the No. 4 range at Kew at the present time may be seen quite an attractive variety of *Solanums* in fruit. In some instances the capsules containing the fruits are of the size and form of an ordinary hen's egg, the colour being that of the egg when hard boiled and bereft of its shell. Others have the fruits coloured with purple and shaded with a similar tone, yet not so attractive as the whiter kinds.

Physalis Franchetti.—The value of this plant in open beds is now well known and justly appreciated. Its use as a pot plant, however, is much more limited, though equally valuable by reason of its striking effect when brought into the greenhouse. Grown in large pots, with a good supply of rich loamy soil, and plunged to the rim during the summer in an open position, the plants would be less likely to suffer from dryness. Both water and liquid manure may be supplied freely to encourage an early growth, as unless this is done, an undue dwarfness may rob the plant of much of its value.

Fruiting of the Wistaria.—Can any reader of THE GARDEN kindly say if it is usual for the Chinese Wistaria, or Kidney Bean Tree, as Nicholson calls it, to produce fruit in British gardens? I am led to ask this question because Mr. T. Walpole has just brought me a fruit or pod 7 inches in length covered with soft silky tomentum, and having about half a turn or twist in its length. This fruit was produced by a rather young plant of the white-flowered *W. sinensis* at Rossanagh, Co. Wicklow, and it is the first fruit I have seen or heard of as growing in Ireland.—F. W. B.

Autumn Crocus in grass.—Very pretty just now quite near the main entrance on the green to the Royal Gardens, Kew, are the single white *Colchicum autumnale* and that fine autumn Crocus, *C. speciosus*. There is no attempt at massing in either case, though a very pretty picture is the result of a free sprinkling of both kinds in the turf, the planting extending in the direction of the large succulent house. When we remember that these things push their way

* "Vegetables for Exhibition and Home Supplies." By E. Beckett. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited.

through the well-nigh solid turf, it is surprising so many appear each year. Naturally in such soil the increase of the bulbs would be very slow, and these who would undertake similar planting would do well to secure a more open and free-rooting medium.

Nepenthes at Kew.—A year or two since, when the fine collection of Pitcher Plants was but indifferently housed in the No. 7 range, it was possible only to get an equally indifferent view of the plants. All this is altered now, and the plants have a structure to themselves in so far that other things are in a way subordinate. At the present time, the multitude of pitchers is encompassed by a hanging and well-coloured screen of *Cissus discolor* that trails nearly to the floor. Of the luxuriance of this stove climber some idea may be formed when it is stated that aerial roots upwards of 2 feet long depend from the branches more or less through the house—a proof of the effect of the tropical humid heat on the plant in question.

Cassia corymbosa.—In spite of the frost it is interesting to find this pretty and useful old plant still flowering abundantly and clothing the bed in which it is growing with its elegant foliage. The foliage is so freely produced, as to form quite a dense covering to the bed. In most bedding plants a centre is formed of one and a margin of another, usually to hide the stems and cover the defects of the former. This *Cassia*, however, completely furnishes the ground in which it is planted, especially when growing quite in open beds. Just now this old plant fills one of the beds in the Royal Horticultural Society's gardens at Chiswick, and its comparative hardiness as well as its late flowering should tempt others to try it. The rich golden yellow flowers, too, are very showy, and in this respect also the plant is not likely to have many rivals.

Tropical Water Lilies in the open air.—If we could make sure of having heat and sunshine as during the past summer, no doubt we should be able to flower many of these plants in the open air by sheltering them during winter, carefully forwarding them in spring, and then dropping them into shallow tanks in May or June when the water had become warmed by the sun. My object in now writing is to ask if the Victoria regia has ever bloomed in the open air in England? Wherever there is a supply of clean, warm water from a factory it might possibly be done. In Haydn's "Dictionary of Dates," under *Victoria regia* I find the following statement: "It was grown in the open air in 1855 by Messrs. Weeks, of Chelsea." Can any reader remember this having been done, and tell us if the plant flowered, and under what conditions as to heating of the water, &c.?—F. W. B.

Anemone japonica elegans.—That this is a pretty form of the Japanese *Anemone* there can be no doubt, while in its freedom of flowering it is quite the equal of the other older forms. Blocks of each of these are always most effective in the late autumn. To be sure of retaining these things, however, sufficiently late to be of service, a special position must be chosen for them. Perhaps the best place would be a west or slightly north-west border, where the plants would be less influenced by the morning sun. In case of frost again much harm is done by the sun shining on the blossoms while these are still more or less frozen. These disastrous effects are considerably modified when the frost is dispelled before the sun reaches the flowers, and the position suggested is probably one of the best. Some years ago a very fine batch of the white and red forms flowered well into November, the position being at the base of a high wall in much the aspect suggested above.

Eucomis punctata.—It is gratifying to read the appreciative notice upon *Eucomis punctata* by Mr. Tallack in THE GARDEN of October 14. It is the more agreeable to read, as one of my correspondents, whose judgment with regard to matters of the kind is worthy of the highest con-

sideration, criticises my remarks made on p. 252 as being much too laudatory. One is, however, glad to see that one has the support of Mr. Tallack in one's endeavour to call a little attention to a neglected plant which is not enough grown in the open. Much as one admires bright and effective colours, there are many plants whose charms do not lie in brilliancy, but in modest colouring or in singularity of form. Those who can appreciate these things will not be likely to regret growing the *Eucomis*. Mr. Tallack has done justice, but no more than justice, to the plant in his clear and faithful description of its appearance. It is one of those plants which is not likely to appeal to the multitude, but one which gives individuality to the garden in which it is grown.—S. ARNOTT.

Anemone blanda.—There is no doubt that the plate of *Anemone blanda cypriana*, with the accompanying letterpress by "E. J." in THE GARDEN of October 7 will be the means of the lovely Greek Windflower being more largely made use of in our gardens of hardy flowers. This *Anemone* is so beautiful in its several forms, that no apology is needed for a brief note in corroboration of the requirements referred to by your correspondent. In the article referred to some stress is laid upon good soil for the seedlings and older plants. As one who has had a good deal of experience in growing this and other plants on light soil, I may add that in very light soil *Anemone blanda* is rarely satisfactory. It is neither so vigorous nor is it so long-lived. In such soil also it does not produce so many self-sown seedlings, probably because they do not make free growth at first and fall an easy prey to dry weather. Nowhere does *Anemone blanda* thrive better than in a heavy soil almost approaching clay in its texture. There is here a good deep blue form called Mr. Ingram's Deep Blue. It was for some years in light soil without producing more than one or two flowers, although it increased in size.—S. ARNOTT.

Helianthemum amabile fl.-pl.—I am obliged to Mr. Cornhill for his note as to this plant, which, as he supposes, is the one referred to a short time ago as the Carton Sun Rose. Through the kindness of Mr. P. H. Normand, of Aberdour, I have had the opportunity of comparing and verifying the plant. Although this disposes of the question as to what this Sun Rose is usually called, it opens up a fresh one regarding the nomenclature of the *Helianthemums*. There is no *Helianthemum* named *amabile* to be found in current books of reference. The plant in question is apparently the one known formerly as *H. venustum fl.-pl.*, but the "Index Kewensis" refers *H. venustum* to *H. variabile*. Neither Paxton's "Botanical Dictionary" nor an old edition of the "Cottage Gardener's Dictionary" mention *H. amabile*, though both name *H. venustum fl.-pl.* I have searched several other works for the purpose of finding the name of *amabile*, but it has not come under my observation. For garden purposes we must, I suppose, either call it *venustum fl.-pl.* or *amabile fl.-pl.* The former is the name by which it was known to gardeners for many years. By whom was that of *amabile* first applied to it?—S. ARNOTT.

Stenoglottis longifolia.—This Cape species of terrestrial Orchid appears to have been shown by Messrs. Sander & Co. at the meeting of the Royal Horticultural Society on October 10. This Orchid is one which seems to grow and thrive with comparatively little care, and to give in return a satisfactory display of flowers, which have the great merit of lasting a long time either in a cool greenhouse or in an ordinary sitting-room. A plant sent me in the summer of 1898 bloomed very satisfactorily during the greater part of last winter. For more than a month it flowered in my sitting-room, although it had been in bloom in the greenhouse for some time previous. When it was past flowering it was returned to the greenhouse, where it has remained until the present time. Although no fire-heat has been applied this autumn, *Stenoglottis longifolia* is now sending up

several flower-spikes, and the blooms upon these will open shortly. Although some do not consider its flowers bright enough, it is yet a pleasing plant with a considerable degree of beauty. I am told that it is figured in the *Botanical Magazine*, vol. cxvii., table 7186, but I have not at present access to the volume. It may be commended to the notice of amateurs and others who desire to grow a few comparatively rare plants which may be cultivated without much difficulty.—S. ARNOTT.

Caryopteris mastacanthus.—I do not quite see the force of "H. P.'s" recommendation (see page 294) for giving this plant "increased attention for flowering under glass," as experience points rather conclusively to the fact that it is this shade of blue that so quickly fades when given the method of culture "H. P." suggests; indeed, the colour of the flowers referred to at Kew, and which agrees with the description, "lavender-blue," is distinctly paler than that of plants of it grown in the open. It is as a hardy plant that this Japan shrub will prove of the greatest value to our gardens, particularly as an autumn-blooming plant when blue-flowering shrubs are not at all common. Why these paler shades of blue under glass so readily lose their colouring I am not able to say, for the well known *Salvia patens* or *Agathæ celestis*, which are deeper in tone, retain their colour much longer. I do not know how long the plants had been in the greenhouse at Kew, but, as seen on October 14, many of the whorls were quite pale-looking. The distinctness of the plant, together with late flowering and hardiness, are items that should go a long way to make this pretty shrub popular. All the plants I have seen have been freely furnished with growth buds on the oldest branches close to the soil, an indication of its inclination to break well from the base.—E. J.

Rhus Toxicodendron radicans.—This Poison Tree is one of the plants we are inclined to despise until autumn comes round, when it assumes its bright leaf colouring. Throughout summer it has no particular attractions, but may be used as a low carpeting shrub of creeping habit. In autumn we are struck by the beauty of its leaves. As is the case with most leaves which are parti-coloured in autumn, it is hardly safe to attempt to describe their colours. These change from day to day, and a clump will give much variety. A few leaves just gathered and now in a glass before me show much variety of hue. Some leaves are pale yellow, spotted and flecked with green. Others are a brilliant and beautiful combination of almost crimson, bright yellow, and green. The worst of the plant is its poisonous reputation. One fears it is not possible to claim for it that it is innocuous, but the statement in a leading work of reference that the typical *Rhus Toxicodendron* of climbing habit is "poisonous to the touch" does not appear to apply to the creeping *radicans*. It has been here for a good many years as the memento of a visit to the Manchester Botanic Garden and its then curator, the late Mr. Bruce Findlay. It has been transplanted more than once, and I have frequent occasion to come into contact with its leaves and stems, but have never had any reason to avoid touching it. There may be some, as in the case of *Primula obconica*, to whom the touching of this *Rhus* would bring painful consequences. One has, however, to speak of plants as he has had experience.—S. ARNOTT.

Crocus cancellatus.—Few things are more pleasing at the time when the outdoor garden loses so many of its attractions than a collection of the autumn-flowering *Crocuses*. They are so delightful in their fresh brightness, that one cannot pass them by without pausing to enjoy for a little longer the charms of their little cups. Those who think them unseasonable are not likely to be long in changing their opinion once they have an opportunity of seeing a few of these lovely flowers on a bright autumn day, such as the one on which this is being written. One is convinced that greater familiarity with them

would lead to their greater popularity. Among those in bloom here at present are two forms of *Crocus cancellatus*. This is a variable species in its colouring, and is, moreover, one of those which has the habit of mimicing in its native habitats the other *Crocuses* with which it grows. The forms in my garden are a white one and a blue one known as *C. cancellatus cilicus*. Of the two I prefer the white, as being more unlike *C. speciosus* and the others of allied colour at present in flower. In its native habitats it is a variable species, and one would like to possess a few more shades of so pretty a little *Crocus*. Mr. George Maw tells us that its segments vary from white to light purple, and self-coloured, or feathered with purple markings. The western forms are generally white, and the eastern blue with various markings. It is a neat and pretty little *Crocus* with orange anthers, style, and stigmata. The Cilician variety here is taller and more vigorous than the white.—S. ARNOTT.

Sternbergia lutea.—If the "Lily of the Field," as *Sternbergia lutea* is called by John Parkinson, could be flowered regularly in every garden, it would supply the want some of us feel—that of a yellow *Crocus*-like plant to bloom with the autumn *Crocuses* and Meadow Saffrons. It is, however, not everyone who can flower it regularly, and I must confess that hitherto I have been unable to bloom either this species or *Sternbergia macrantha* for two years in succession in this garden. It is more correct, indeed, to say that it will only flower the year after planting. This has been a great disappointment, and one is always glad to have any treatment suggested which would give one the pleasure of enjoying a pleasing flower without purchasing and replanting it yearly. I have it in bloom to-day (Oct. 16) from bulbs sent me by a friend who has had a wide experience of plants and their ways, and who has kindly, from his store of knowledge and practice, suggested a method by which one may perhaps have happier fortune than in the past. He had been disappointed with his failure until he removed to a place where his garden is on the chalk. In this garden, it appears, *Sternbergia lutea* grows remarkably well and blooms regularly. The bulbs he kindly sent me from his garden are now in flower, and his experience makes one hope that the use of lime-rubbish and limestone may lead to one having the same enjoyment of the flowers of this and other *Sternbergias*. One says this with some reserve, as districts and the gardens within them often give varying results from the same treatment. I must admit that I am now more hopeful than I have been for long of inducing this delightful plant to bloom yearly. There are many others who have had similar disappointments with it. Perhaps this note may help some to a way of escape from this tantalising experience of blooming this *Sternbergia* for the first year only. As one looks upon it to-day, with its clear yellow flowers open to the October sun, one feels more than a passing pleasure at the sight. Even when in bud it is beautiful, and the appearance of its unopened flowers makes one realise how our older florists classed it with the Daffodil. When in bud its aspect carries us—in fancy, at least—forward to the time when we once more delight in that incomparable flower of spring.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Grotesque flower gardening.—Some of the superintendents of American public gardens seem to surpass all others in the grotesque ugliness of their bedding arrangements. Below is a description of a battleship in flowers. We are pleased to see that one of the American gardening papers (the *Park and Cemetery of Chicago*) condemns these wasted efforts.

"In dark red lettering near the base the words 'Erected by the Michigan Central R. R. in Remembrance of the Maine' are plainly set out. The design consumed 1820 *Alternanthera versicolor*, 3010 *A. aurea uana*, 980 *A. spathulata*, 2200 red *A. paronychioides major*, 2985 *Echeveria metallica*, 365 *E.*

secunda glauca, 8540 *Sedum variegatum* and 100 *Oxalis corniculata*."

Although these outrages against good taste are happily getting less common in our country, we are still not free from them, and this summer there was in Dulwich Park a pretentious absurdity of the sort, consisting of the arms of Dulwich College with a Latin inscription, all done in carpet-bedding plants.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 24, in the Drill Hall, James Street, Westminster, 1 to 4 p.m. A lecture on "Growth of the Fruit Trade" will be given by Mr. Geo. Monro at 3 o'clock. The War Office having asked for the Drill Hall of the London Scottish Volunteers (in which the meetings of the Royal Horticultural Society are held) to be placed at its disposal for the temporary accommodation of 300 soldiers *en route* for South Africa, it is probable that the society's meeting on October 24 will have to be held in the Drill hall of the Queen's Westminster Volunteers, which adjoins that of the London Scottish, being actually the next door. If this should be the case, Fellows and exhibitors are requested to make the best of unavoidable inconvenience, which, it is hoped, will not have to be repeated.

The following dates have been fixed provisionally for meetings in 1900: January 9, 23; February 13, 27; March 13, 27; April 10, 24; May 8, 23, 24, 25 (Temple); June 5, 19, 27 (Richmond); July 3, 17, 31; August 14, 28; September 11, 25, 27, 28, 29 (Crystal Palace); October 9, 23; November 6, 20; December 4, 18; January, 1901, 15, 29; February 12. Gentlemen willing to lecture on any of these dates are requested to communicate with the secretary, 117, Victoria Street, S.W., at once.

Trials will be made at Chiswick in 1900 with the following subjects: (1) Tulips for outdoor decoration.—Twelve bulbs of each variety should be sent at once to the superintendent, Royal Horticultural Society's Gardens, Chiswick, W. Each variety should be marked with its colour, and whether early, midseason, or late. (2) *Phlox decussata*.—Two plants of each should be sent on or before March 1. (3) *Cactus Dahlias*.—The 1899 trial will be repeated. Any new varieties, two plants of each, should be sent in April. (4) Potatoes.—New varieties, twenty tubers to be sent before February 1; also a trial of distinctly early Potatoes, both old and new varieties requested. (5) Tomatoes.—For outdoors only. Seed before February 1. (6) Peas.—Half a pint to be sent in January. (7) *Celeriac*.—Seed in January.

The Royal Horticultural Society will hold its next examination in horticulture on Tuesday, April 17, 1900. For syllabus, apply to the secretary, Royal Horticultural Society, 117, Victoria Street, S.W., enclosing a stamp.

Carnation Mrs. G. Foster.—As the raiser of this variety, I must protest against your remarks in *THE GARDEN* of September 30. Had your reporter understood his work, he would have noticed that the growth of the plant was that of a perpetual bloomer. Because the blooms are much larger and have smoother petals than the ordinary Tree Carnation, it is hardly fair to brand it as a late border variety. It has been grown here in quantity these last four years, and I have had it in bloom nine months out of twelve. I have proved it a much better perpetual bloomer than *Uriah Pike*, which has repeatedly been recommended in *THE GARDEN* as a Tree or perpetual.—G. FOSTER, *The Gardens, Glendoragh, Teignmouth*.

"* We can only deal with things as we find them. In this instance every flower has badly

burst the calyx, which fact we stated with regret. The plants exhibited, one of which was in a 7-inch pot and the other in a 5-inch pot, had a total of three open flowers, the larger plant being obviously grown upon the border plan, and displaying the current as also the former growth unmistakably. Mr. Foster is probably not aware of the way the plants were shown, and the best way to prove the perpetual character would be to send the same plants on Tuesday next. Evidences of perpetual growth were entirely wanting, 6 inches of the base in the older plant being leafless and bare. That this variety has been flowered "nine months out of twelve" does not alter the matter. Miss Audrey Campbell, also a yellow, has been flowered in every month of the twelve, and still figures as a good border Carnation notwithstanding.—Ed.

PUBLIC GARDENS.

The Metropolitan Public Gardens Association.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, on Thursday, Mr. Hugh Leonard presiding, it was stated that the amendment proposed by the association to the Commons and Open Spaces Bill of last Session had been accepted, and that the Bill having since passed into law, all county councils were by means of this amendment able themselves to acquire and maintain land for public recreation or to assist municipal and district councils and other local authorities to do so. It was also mentioned that the clause promoted by the association for the protection of open spaces had been inserted in the Local Government Act. A number of letters were read asking for the assistance of the association in the preservation of Albert Square, Commercial Road, E., which was offered for sale as a building site, and it was decided to approach the various local authorities concerned and the London County Council, urging them to jointly acquire the site if obtainable on reasonable terms. A letter was read from the Bethnal Green Vestry offering to maintain Marian Square, Hackney Road, if the association would undertake to lay out and fence in the ground. It was agreed to take further steps in the matter, and it was stated that out of the £106 required for the fencing, £80 had been promised. Many proposals were under consideration, including schemes for the acquisition and laying out of sites in Fulham, Earlsfield, Westminster, Essex Road, Shadwell, and Enfield. Among a number of new members joining the association were Princess Louise and Sir Edward Malet.

Names of fruit.—*F. F. P.*—1, Fearn's Pippin; 2, Ashmead's Kernel; 3, Sam Young.—*Henry Oliver*.—1, Beurré Hardy; 2, please send better specimen; 3, Blenheim Orange; 4, Striped Beaufin; 5, Lord Suffield; 6, Bess Pool.—*E. F.*—1, Queen Caroline; 14, Dutch Miguonne; 23, Cox's Pomona; 24, Winter Hawthornden; 45, Emperor Alexander; 47, Ashmead's Kernel; 63, Warner's King; 69, Cellini; 77, Striped Beaufin.—*J. Morrison*.—1, Felix de Leim; 2, Marie Louise d'Uccle.—*F. Hussey*.—1, Hoary Morning; 2, probably Peasegood's Non-such out of character; 3, Maltster; 4, Norfolk Beaufin; 5, Minchall Crab; 6, Herefordshire Pearmain.

Names of plant.—*R. Blenkinsop*.—*Arauja* (*Physanthus*) *albans*.—*Bannerman*.—*Berberis vulgaris*.

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THE GARDEN.

No. 1458.—VOL. LVI.]

[OCTOBER 28, 1899.

INDEX.

(Illustrations in Italics.)

Orchids:—	Acacias in California 335	Books:—	<i>Pear Jargonelle in bloom</i> .. 344	Chrysanthemums, how to use large blooms of 345
Dendrobium bigibbum .. 332	Allamanda Hendersoni .. 335	"The Strawberry Manual" 340	<i>Pear Jargonelle in Herefordshire</i> 344	Societies:—
Dendrobium formosum giganteum 331	Begonia Gloire de Lorraine 335	"The Teaching Botanist" .. 310	Plum Webster's Gage .. 344	National Chrysanthemum .. 343
Lælia elegans Stelzneriana .. 332	Carnations, Tree, housing .. 335	Trees and Shrubs:—	Strawberries at Gunnersbury 344	Royal Horticultural .. 346
Lælia rubescens .. 331	Freeseas falling .. 335	Cytisus nigricans 341	Strawberry Latest of All .. 345	Notes of the Week:—
Ocoidium Lanceanum .. 332	Glasshouse, a useful .. 337	Acer chinatum 342	Wasps and fruit 344	Alyssum maritimum 348
Pleione præcox .. 332	Lily of the Valley .. 335	Acer heterophyllum .. 342		Androsace lanuginosa .. 348
Trichosma suavis 332	September in S. Devon .. 336	Acer palmatum 342		Callistephus sinensis .. 348
Flower:—	Kitchen:—	Honeysuckles, hush .. 341	Chrysanthemums:—	Chrysanthemum Miss Alice Byron 348
Aster Amellus and others .. 332	Celery, late 338	Maples, the 342	Chrysanthemum Kathleen Rogers 345	Kniphofia multiflora .. 348
Biennials, raising .. 334	Peas, vegetable refuse for .. 337	Shrubs, flowering, in South Devon 342	Chrysanthemum Lemon Queen .. 346	Primula capitata .. 348
<i>Cortaderia Lambleyi foliis variegata</i> .. 333	Tomatoes, notes on .. 338	Orchard and Fruit:—	Chrysanthemum M. Louis Remy .. 346	Saxifraga peltata .. 348
Edinburgh Botanic Gardens 333		Apple Cox's Orange Pippin 343	Chrysanthemum Mrs. White Popham .. 346	Vitis Coignetiae 348
Lobelia for stock .. 334	Garden Flora:—	Apples, Australian stocks for .. 343	Chrysanthemum shows, foreign .. 345	Miscellaneous:—
Michaelmas Daisies .. 333	Clivia miniata citrina .. 338	Canker, is potash a cure for? 343	Chrysanthemum Wattle Blossom 345	Brockwell Park, enlarging 348
Pampas Grasses, silver variegated 333	Week's Work:—	Fruit growers, puzzled amateur .. 343		Celery, grubs in 348
Stove and Greenhouse:—	Fruits under glass, work among 339	Grape Buckland Sweet-water 344		Theft, a mean 348
<i>Acacia decurrens in California</i> 335	Kitchen garden, work in the 339			

ORCHIDS.

DENDROBIUM FORMOSUM GIGANTEUM.

THIS beautiful Dendrobium is well grown by Mr. Hudson at Gunnersbury House. The whole of the front stage of one of the largest lean-to houses was filled with plants of this species carrying between 600 and 700 expanded flowers. Many of us who saw the same plants exhibited last year were struck with the wonderful size of the blooms. This season if anything the flowers are even larger and with more substance. Many of the plants carried from twenty to forty blooms each; one truss I particularly noted carried fifteen flowers. Mr. Hudson is to be congratulated on the successful culture of this species, which, generally speaking, is found to be one of the most difficult of the Dendrobium family to deal with. The plants grow and flower freely for the first two or three years after they have been imported. After this period they generally deteriorate and become practically fit only for the rubbish heap. Some of Mr. Hudson's plants have been grown for over five years, and instead of deterioration the bulbs made this year are larger than any previously made. To illustrate still further the success of the treatment, I may mention that when the last batch of imported plants came to hand three years ago some seed must have been imported among the roots and about the base of the plants, for after they had been potted, or rather basketed a few months, this seed began to germinate, and ultimately seedling plants were developed. I took the particulars of the progress made in the three years' growth, which was as follows: The first year's bulb was an inch long, the second 3 inches, and this year, which is the third season, the growth measures 5 inches, showing that the cultural conditions are satisfactory in every degree. The conditions under which the plants are grown might be adopted in other places where fruit growing is a speciality. The plants are easily procured. There is certainly not a more useful Orchid for cutting during the months of September, October, and the greater part of November. The durability of the plants

and the lasting qualities after they are cut leave nothing to be desired.

The system of culture followed at Gunnersbury is as follows: The plants are grown in the span-roofed houses used for growing Figs, the glass with which the roof is glazed being unusually large in the individual squares, thereby affording abundance of light. A bar reaches from end to end. This is fixed to the roof on either side over the walk which passes through the centre. In this position the plants naturally obtain the benefit of the full rays of the sun. The houses are not shaded at any time of the year. The atmosphere is also maintained in a humid condition, and the plants are not allowed to become dry at the roots. They are also freely syringed overhead as frequently as are the other occupants of the house. This is continued until the growths are matured and the flower-buds commence to develop. When the blooms expand the plants are removed to a warm house where the atmosphere is less humid. Full sun is still afforded until they have become fully expanded; then a thin canvas blind is placed over to protect the flowers during the hottest part of the day. After the flowers have been removed, the plants are kept drier at the roots, only sufficient moisture being given to maintain a plump condition of the bulbs. Cooler conditions also are afforded, and the plants receive a thorough rest until the return of spring, when they are again placed in the position above referred to in the Fig houses.—H. J. C.

—The usefulness of this Dendrobe is well known, but it is doubtful if there are not many private gardeners who would envy the man who can produce 630 open flowers at one time. This Dendrobe is often looked upon as an indifferent one in its growth; it flowers freely enough when there is the necessary strength in the pseudo-bulb. A narrow stage in the front of a warm house at Gunnersbury House accommodates about forty plants, on which I counted over 600 flowers, with many buds yet to open. For several seasons they have contributed a similar display. They are growing mostly in baskets, which are thickly packed with active feeding roots, showing that the culture is of the best. Orchids are not grown largely at Gunnersbury, but

vigour and freedom of flower characterise those which I noted in the several plant houses. *Vanda cœrulea* seemed as happy as the Dendrobiums both in cool and warmer temperatures, the flowering season extending over several months. Mr. Hudson's treatment of this useful Dendrobe would form an instructive lesson to many growers.—W.

—It will be generally conceded that this is one of the most valuable, as it is one of the most beautiful of late summer and early-flowering Orchids. This is apparent in the size as much as in the substance, and not least in the freedom of the flowers, especially in those instances where the culture of the plant is fully understood. In not a few instances has failure, either wholly or in part, followed the second flowering of the imported plants of this unique kind. It is in these circumstances, therefore, that we refer to the splendid lot of plants recently noted in bloom in one of the Fig forcing houses at Gunnersbury House. It is not, let it be clearly understood, a splendid array of flowers appearing from already matured growths upon imported plants; it is really the flowering in the main of a fine lot of cultivated examples, some of which, as may be proved by the plants themselves, had been on the downward path. But the way these plants have responded to an altered treatment is alone an object-lesson. Plants with pseudo-bulbs less than the small finger of the hand four and five years back have now finely proportioned growths, many 15 inches long. It is quite a stock saying when a good plant of this kind is seen in flower, "What about it this time next year?" Well, the answer, so far as the Gunnersbury plants, is "better still." The plants are the very embodiment of health and vigour, and the entire secret—if there be secret at all—is full light and heat, with moisture. The Orchids are suspended by a wire to the rafters, the glass is very large squares, and there are no shade and no obstruction. The Figs are plunged in leaves, and doubtless the heat and moisture arising therefrom are an influence for good on these Orchids.—E. J.

Lælia rubescens.—Though a striking and pretty species, this is none too plentifully represented in collections, though it has been in cultivation a number of years. Of dwarf habit, it throws up its spikes to the height of about a foot, and each produces half a dozen flowers, the sepals and petals of which are rosy lilac, the lip similar

in ground colour with a fine purple blotch. Plenty of water while growing and a raft or shallow basket where the roots can penetrate to the air freely, and a position close to the glass in the Mexican house suit this plant well.

Dendrobium bigibbum.—This is one of the prettiest of autumn-flowering Dendrobiums. The blossoms are magenta, with a white centre to the lip in most varieties, these appearing in the centre of the young growth and from the sides of older pseudo-bulbs. Given ample heat and atmospheric moisture while growing, a light position and small pots, *D. bigibbum* usually thrives better than the majority of the Australian kinds, but it dislikes severe drying or too cool a temperature while at rest.

Pleione præcox.—In habit and general appearance of plant and flowers this very closely resembles *P. Lagenaria*, but it has usually paler tints in the lip and blooms later. The late autumn and winter months may be brightened considerably by these pretty little Orchids, but the common method of growing them in large pans is not so good as giving them small pots, so that when they are in flower the absence of their own foliage may be got over by associating them with small Ferns. The compost should consist of equal parts of peat, Moss and loam fibre, with sufficient opening material, and repotting should take place directly the flowers are past.

Lælia elegans Stelzneriana.—This is a pretty variety of this most useful *Lælia* belonging to the same section as *L. e. Schilleriana*, but having larger flowers than the majority of this set. The sepals and petals are broad and well displayed, usually of a very faint rose, but some flowers are more deeply coloured than others. The lip has a bright margin of rich purple on a mauve ground. The plant is not difficult to cultivate, thriving well if treated like *Cattleya* bicolor or others of the slender-stemmed kinds in medium-sized pots filled with peat fibre and moss. The plants must be well watered during the season of growth.

Trichosma suavis.—In spite of the small size of the blossoms, this pretty species is always admired when presented in good condition. Weak and unhealthy bits do not throw the flowers out of the sheath properly; they are unsightly and not at all showy. The stems on strong plants are 8 inches high and bear each a pair of tough, dark green leaves, from between which the flower-spikes are produced. In growing *T. suavis*—which is the only species in the genus—a cool, moist and shady house in summer is necessary, and during winter as much light as possible. In mixing the compost use rather more Sphagnum than peat, and a few fairly large lumps of charcoal or crocks help to keep the whole open. Drain the pots well, choosing those of medium size compared with that of the plant. By these means a healthy, clean growth is ensured, and as long as this is the case plenty of flowers will be forthcoming. The individual blossoms are about 1½ inches across, the sepals and petals white, the lip white, with a brownish crimson and yellow crest.

Oncidium Lanceanum.—This superb species is now finely in flower, and out of a somewhat extensive batch noted recently there would be no difficulty in picking out a number of varieties. The plant, indeed, is a great deal more variable than many that have obtained a number of varietal names, the chief difference, of course, being in colour, which in its best forms is very rich. The most usual colour is a greenish yellow with numerous spots of chocolate-purple, and the lip has purple side lobes with white or nearly white centre or front lobe. The spikes rise from the base of the great spotted leaves, which on healthy plants are from 18 inches to 24 inches in length, very thick, and doubtless acting in the same capacity as pseudo-bulbs. The plant will not, however, stand the same winter drought as many pseudo-bulbous kinds. Without a doubt they are rather severely dried in their native place, but in this country the growth is not so

well ripened by exposure to sun and air, and in consequence not able to stand the drying treatment so well. I have found clean Sphagnum Moss with only a little peat a better compost for it than the usual mixture of half and half, as the Moss in its decay does not form a close mass like the peat, and the plants dislike disturbance. For temperature a brisk sun-heat in summer is desirable with warm, if fairly dry, quarters in winter. It is named after Mr. J. H. Lance, its discoverer, who found it in Surinam in 1834 growing on various tropical trees. It was first flowered in this country by Messrs. Loddiges, of Hackney.—H. R.

FLOWER GARDEN.

ASTER AMELLUS AND OTHERS.

NEARLY every week in early autumn we read a note that *Aster bessarabicus* is now in flower and is very beautiful, but what it is and by what characters distinguished from *A. Amellus* I have in vain tried for many years to discover. I have seen in gardens very different flowers, each of which I have been assured is the only true and genuine var. *bessarabicus*. The original authority for this name is said to be Bernhard in Reichenbach's "*Flora Germanica*," a work to which I have not access. De Candolle, who recognises var. *bessarabicus* in his "*Prodromus*," mentions slight differences in the shape of the leaf and the bracts, differences which certainly exist amongst the forms called *Amellus*, and no doubt whatever may have been the original distinctive characters have disappeared in cultivation, and the name *bessarabicus* is now added in the most casual way. About twenty years ago I received from a Devonshire garden, from which I have had many rare and choice plants, var. *bessarabicus*, having the flowers flatly open and the rays narrow and acute. This is a distinct form of flower from the general type *Amellus*, which has the rays broader, somewhat incurved and obtuse, but after growing for a generation or two from seed, the two forms seemed by no means constant, and I gave up the name *bessarabicus* as representing in gardens no definite form. Still, the large garden form of *Amellus*, whether the flowers are flat or cupped, is very different from and very superior to the only type of *Amellus* I have ever seen wild. It abounds in Savoy near Aix, and though the colour in its native air is good, the flowers are small and the habit top-heavy, and it does not improve when brought into cultivation, though I have never seen it in England except in my garden. A so-called white form coming from the same district has flowers of a dull cream colour, with sparse and irregular rays, and is a very inferior garden plant. Still, the *A. Amellus* of Savoy is certainly the *Amellus* of Virgil with which that poet was familiar as a boy in his native meadows of Lombardy. He describes it as making a large bush of stalks from a single crown, as having golden flowers surrounded by many violet-coloured rays, with leaves of a rough, bitter taste—a description we can hardly mistake. Still, the *Amellus* of South-eastern France and Northern Italy is not the *Amellus* of English gardens, which does not look like a development of it. Perhaps our garden plant is the Greek type, which Sibthorp found plentiful in Attica, and it was called in Gerard's time the *Attic Starwort*.

As for varieties of *Amellus*, I have grown several crops of the plant from seed ripened in Devonshire, for it seldom ripens in Cheshire. The handsomest flowers are those with large incurved rays and semi-double. I have never succeeded in raising one really blue, but some

have far less red than others in their mixture, and the less the better. Some are of a rich imperial purple, and they show better in the subdued light of morning or evening than in sunshine. A really white *Amellus* of the best class of flower is a great desideratum, as a mixture of white sets off the colour of the others; but I have an excellent large-flowered seedling white hybrid of just the same stature and time of flowering which I grow side by side with *Amellus* to good effect.

While speaking of other Michaelmas Daisies, I may say that they are very late this year in Edge garden, and in some situations were quite ruined in the hot July by oidium like that which covers the leaves of Swede Turnips after hot, dry summers. Where they escaped this and were not broken to pieces by the furious storms of September, they continue to be good. I am glad to see by notes in THE GARDEN that the plan I have always advocated of raising Michaelmas Daisies from seed of the best flowers and improving them by selection every year is being adopted. At Edge I have already superseded nearly all the Conference Asters; yet I do not claim to have done better than other amateurs where they are selected in the same way. I have named about thirty of my seedlings, some of which have found their way into commerce. The naming has been done very casually in some such way as this: A visitor to my garden admires a pretty pale blue seedling flower, which I promise shall be named Nancy after her. In a few days six sisters who have heard of this come to me and say that they are nearer neighbours and older friends of mine than Nancy, and each of them must give their name to a flower, and so the number of names grows, and as the multiplication of roots in this class is endless, they get distributed, carrying their chance names with them.

A very few years ago I set up a neighbour (a Cheshire squire) with Michaelmas Daisies, advising him to practise selection from seed. Last year he asked me how my stock was getting on, and so I sent him a tin box full of more recent specimens. He wrote back saying that mine were nowhere compared with his, and sent me specimens in return. Of course, I thought his nowhere; but the incident suggested two things: First, that we all are apt to over-rate our own children; and secondly, that when Aster flowers have been packed up for twenty-four hours they get a withered and sleepy look, which obscures their merits, and they do not recover from it in water. They should always be judged growing, as so much depends on their habit.

Where this last advice can be followed, what I am going to say is of less consequence, but I never can see the use in the case of flowers which are certainly nearly all hybrids of dividing them under such heads as *A. levis*, *A. Novi-Belgii*, *A. versicolor*, &c. The points which amateurs, if they cannot see flowers, care to know are the height, the relative time of flowering (early, medium, or late), the colour, and perhaps the size of the flowers. A heading—"cordifolius," for instance—would to most growers of Asters suggest dense panicles of minute flowers; but *cordifolius* makes many hybrids, few of them of much merit, in which the heart-shaped character of leaf is retained, with flowers of every size up to those of the type *levis*. It seems to me that nearly all Asters of the Michaelmas Daisy type are prone to cross, and as the progeny is often fertile, it is not only puzzling, but, from a gardener's point of view, useless to class them according to their specific characters.

Edge Hall, Malpas.

C. WOLLEY-DOD.

SILVER VARIEGATED PAMPAS
GRASSES.

FOR many years past I have grown a very prettily variegated form of the above-named plant received from a London nurseryman under the name of *Cortaderia* or *Gynerium* *Lambleyi*, but as to the correctness of this name I have for some time felt strong doubts, as I had never come across this specific name anywhere else. From a French nurseryman in the course of last autumn I received two varieties of variegated Pampas Grass under the respective names of *Cortaderia* *Wesserlinghi* and *C. Stenakeri*; these are now both in flower, and on comparison of the inflorescences I find that *C. Wesserlinghi* is identical with what I have hitherto known as *C. Lambleyi*. It is an exceedingly distinct and desirable variety, and when established very free-blooming, as my old plant, though only of medium size, is now bearing thirty-three of its ornamental plumes, which are of a perfectly upright habit and of a pleasing pale rosy hue rather difficult to describe with exact accuracy, and unlike in form those of any of the many other varieties known to me. It is also of an admirably dwarf, compact habit of growth, and is, I consider, a distinct and desirable addition to any collection of ornamental grasses, however choice. It is also apparently perfectly hardy. The other variety named above as *C. Stenakeri* is also most desirable and of quite distinct appearance, having a much whiter variegation and perfectly white plumes.

W. E. GUMBLETON.

THE EDINBURGH BOTANIC GARDENS.

MOST botanic gardens possess attractions for those who care for the variety which is to be found in the world of plants. The Royal Botanic Gardens of Edinburgh are no exception to the rule. They have for some time been undergoing extensive alterations, which must very materially interfere with the ordinary work of the staff and prevent many little details of cultivation from being carried out. Much still remains to be done before the alterations are completed, and one can hardly judge of the general effect of the changes until they are finished. At present one can, however, say that the enlargement of the glass structures has not only enabled Professor Balfour to add to the collection of plants, but also to display the others to greater advantage. The gain to the public is no slight one, as the plants can be viewed with comfort and in a more thorough way. The new paths in course of construction will also give easier access to the different points of interest.

The middle of September is not the most attractive time to see the outdoor plants to advantage, yet one can at all times find something worthy of notice. Dwellers in Scotland will find it worth their while to examine the shrubs on the wall in front of the terrace. Here they will acquire an idea of what may be suitable wall shrubs for cultivation in the north of Scotland. Some of those on this wall receive a little protection, but care is taken that there is no "coddling" and that the covering is not applied too early. There are several *Escallonias*, among which I saw *illinita*, *ptero-cladon*, *exoniensis*, *rubra*, *punctata*, and *viscosa*. One of the hardiest at Edinburgh is *E. Philliana*, a plant whose pleasing appearance is much admired. *Jasminum floribundum* was coming into bloom, but *Buddleia intermedia* had just gone out of flower. *Azara integrifolia* and *A. Gilliesi* both looked healthy. *Calycanthus floridus* and *C. occidentalis* were seen in good condition. The pretty *Berberidopsis corallina* was in bloom, while others not in flower were *Lonicera Standishi*, *Olearia macrodonta*, *Magnolia grandiflora*, *Elaeagnus macrophylla* and *E. glabra*, *Ilex latifolia*, *I. cornuta*, *Lupinus arboreus*, and *Raphiolepis japonica*. One is doubtful if the last will live long

at Edinburgh. *Vitis Coignetiae* and *V. striata* (Baker) were also on this wall, which is, unfortunately, too low for some of the shrubs upon it.

At so late a season one could not expect to see many things in bloom in the beds, as it ought to be remembered there is no planting for effect. The popular *Clematis Davidiana* was in flower,

and as fine a piece as I have ever seen in a garden. A very conspicuous plant was *Cnicus pannonicus* var. *divaricatus*, and the distinct *Helenium striatum* was also effective. *Pulicaria vulgaris*, about 1½ feet high, seemed rather a nice little yellow composite, and I was pleased with a nice specimen of *Liatris cylindrica* with bright flowers. As one

who thinks the *Lupines* rather neglected flowers, I was glad to see in bloom *L. Cruickshanki*, whose fault of short spikes is partly atoned for by the blue, white, red, and yellow colour of the flowers. Perhaps the prettiest of the tall plants in the beds was *Gypsophila Steveni*. This is not the flower usually grown under the name given, which is inferior to the one at Edinburgh. *Eryngiums* and several other genera, interesting though they are, must be passed over.

The pond in the Royal Botanic Gardens is not large enough for water gardening as it is practised at the present day, and it has become crowded up with *Aponogeton distachyon*, to the disadvantage of some of the new *Nymphaeas* only recently planted. The Water Hawthorn is, however, so pretty in itself that it could ill be spared. By the side of the pond are some grand New Zealand *Flaxes*, which look as if they delighted in the moisture at their roots. A clump of *Rodgersia podophylla*, large in leaf and with the fine bronzy colour so much desired, grows by the margin also. *Polygonum affine*, *Saxifraga peltata*, and *S. aquatica*, with other plants, are equally at home. A dry season like the past is not the best for the famed rock garden, and in consequence of the drought, coupled with the late spring frosts, an unusually large number of plants has been lost. Of course, newly-put-out plants have suffered most, and as alterations were in progress, there has been a large percentage of deaths. Still, even at so late a season for alpine flowers the rock garden was worth seeing. Among the prettiest things was *Anemonopsis macrophylla*, a flower which has been in the hands of the trade for some time, but has not yet found its way into many private gardens. It is a pretty *Anemone*-like flower with white blooms, and is a good plant for the border or rock garden. *Dianthus Noëanus*, although not showy, is a neat single white *Pink* useful for its late blooming. It is of trailing habit. Worthy of remark, too, is *Oxalis Valdiviana*. If—and this is not proved—its tuberous roots do not resist our hard winters, the plant is as good as a perennial one, as it comes up and flowers annually either from the roots or



Cortaderia Lambleyi foliis variegatis. From a photograph sent by Mr. W. E. Gumbleton, Belgrove, Queenstown.

and a number of dwarf annuals relieved the dullness of places where perennial flowers were over. Among the Mulleins I noted *Verbascum repandum* as being pretty with its branching spikes of yellow flowers. *V. speciosum* has large yellow blooms which, but for being larger, are much like those of *V. Thapsus*. In one bed there was a mass of *Pratia angulata*. It was over 2½ feet in diameter,

seeds. Its colour is in its favour, as we have few hardy yellow flowers of its character. A pleasing little plant is *Antirrhinum asarinum*, which seems quite hardy at Edinburgh, where it rambles among the stones, looking well with its creamy flowers. Two pits sunk below the level of the upper part of the rock garden are, I believe, to be slightly altered for better access. On the per-

pendicular sides are some thriving *Ramondias*, including *pyrenaica*, *pyrenaica alba*, and *Nathaliae*. The pretty, but rather difficult to keep, *Lithospermum graminifolium* seemed to be happy in such a position.

The privilege kindly afforded me of an inspection of the plants in the frames showed one that there is likely to be no falling off, but rather an increase, in the number of new plants on view. These are, however, too numerous to speak of at present. Nor can one do more than allude to the *Veronicas* and other plants in the beds on the terrace. A necessarily hurried walk through the houses gave much pleasure. One who has for years grown a few Cacti and who has still a liking for their quaint forms and brilliant flowers cannot but be pleased with the Edinburgh collection, small though it is compared with that at Kew. *Mesembryanthemums*, *Haworthias*, *Crassulas*, and other genera of succulents are also in considerable numbers. Insectivorous plants have for long been grown in the gardens, and, now that they are better displayed, the public take more interest in them. *Nepenthes* are well grown, and it is interesting to see at what an early stage seedlings begin to show miniature pitchers.

Among other plants, more or less uncommon, which were in bloom were some nice hybrid *Passifloras*, *Calceolaria Burbridgei*, with yellow flowers; the effective *Begonia luxurians*, which would appear as if it might be valuable to the hybridiser; *Lantana Camara*, with the beautiful *Lantana hybrida alba* on a wall in the corridor; *Cassia corymbosa*, the Nash Court variety of *Lapageria rosea*, *Diplacus coccinea*, with a few nice Orchids and miscellaneous plants were also in bloom in the houses. Palms, Ferns, and stove plants were generally in capital order. The further extension, which will connect the Palm house with the other glass structures, will be a great convenience not only to the staff, but also to visitors, besides giving the additional room still needed. S. ARNOTT.

LOBELIA FOR STOCK.

IN the remarks on p. 254, pot culture during summer is suggested by "H." as a good way whereby to secure stock of the above. A little reflection, however, will not fail to show how difficult this method of culture would be in a summer like that of the present year; indeed, if carried out as advised there is frequent trouble in damping during winter. A far better plan, entailing much less labour and no daily watering in summer, is in spring, when the bedding out is finished, to plant out a few in a reserve plot of ground where their flowering is not needed. Nothing more will be needed till the first week of August, when the whole of the tufts may be cut closely over with scissors or shears, leaving an inch of growth at most remaining. A week or two later, say towards the end of the month, the cut-back plants will be full of new growth, which by reason of the hard pruning will be genuine shoots as opposed to flowering shoots. At any moment the plants may be lifted, pulled into quite small pieces, and planted in sandy soil in boxes placed forthwith in a cold frame or a manure frame just losing its heat. If very hot, shading may be needed. Fresh root action quickly follows. Propagating trays 8 inches wide, 15 inches long, and 1½ inches deep will take about fifty plants. No drainage is required beyond the screenings of the soil by reason of the shallowness of the trays.

By the end of the year the plants will have grown into one complete carpet, and all that is necessary is a cool place with freedom from drip. One such box as I have stated will yield more than a dozen pots. I have adopted this method since 1876, when it occurred to me quite accidentally, having previously had some considerable trouble in securing supplies. A decided advantage is that a very early start may be made, and if only a moderate supply is needed, cuttings of the ordinary stamp are not necessary, as by dividing and replanting the stock boxes abundance can be obtained. The above method, both

for its simplicity and for its advantages over the old method of lifting and potting the worn-out plants, cannot too widely be known. Even when requiring from 30,000 to 50,000 plants of *Lobelia* alone I have been content with planting about five or six dozen in the early summer, so great is the supply of growth later. But where large lots are needed, it is perhaps better not to let the stock intended plants flower at all, cutting them over twice instead of once, and the first time more lightly. The same method holds good for *Alternanthera*, *Ageratum*, and other things of like character. That one time popular carpet plant, *Mentha Pulegium gibraltaria*, may be increased on similar lines to the *Lobelia*.

E. J.

MICHAELMAS DAISIES.

STARWORTS are *par excellence* the flowers of September, and numerous are the species and varieties that decorate the borders with their suave colour gradations, ranging in tint from deep purple through infinite shades of mauve, lavender, and palest blue to white. *Aster Amellus bessarabicus*, the first of the Michaelmas Daisies to expand its blooms, commencing its display early in the month of August, is one of the most enduring of the whole family, often retaining blossoms until late in October. During September this variety, with its large purple-blue, gold-centred flowers borne in countless profusion, is a most attractive sight. This Starwort is particularly well adapted to small gardens, as, in addition to its striking decorative qualities, it possesses the additional merit of being easily kept within bounds, which is far from being the case with the majority of the perennial *Asters*, many of which are far too rampant in growth for small borders. *A. acris* is effective for grouping, informal masses along the edge of a shrubbery providing charming autumnal pictures with their dense sheets of soft colouring thrown up by the evergreen background. *A. laevis* and its varieties are also ornamental, *A. l. Apollo* being especially taking. Of the *Novi-Belgii* section the first to open its blossoms is the white *Harpur-Crewe*, this being one of the best of the pure white varieties. The centres of the flowers at the time of their first expansion are yellow, but soon assume a deep brown tint. Other good, but later whites are *niveus* and *polyphyllus*. *A. N.-B. Robert Parker*, which grows to a height of over 6 feet, is without doubt the most graceful of the tall-growing kinds, bearing long slender shoots with delicate side sprays studded with large pale mauve blossoms, which are not so closely set as to detract from its elegance. For arranging loosely in tall vases this variety is not to be excelled. In this section *Pluto* and *Autumn Glory* are two good dark-flowered forms. *A. puniceus pulcherrimus* is a robust growing variety, attaining a height of from 5 feet to 6 feet and throwing up sturdy flower-stems, which are smothered in a profusion of good-sized blooms of palest lilac, which become white soon after they are fully expanded. *Aster Arcturus* is an attractive Starwort with deep purple-blue flowers and almost black stems, while *A. cordifolius* and *A. cordifolius elegans*, the former bearing countless small white blooms on branching stems and the latter blossoms of a pale mauve tint, are valuable both for the border and for supplying cut flowers. *A. ericoides*, with minute white Daisy-like blossoms thickly set on flower-sprays, whose foliage resembles that of the Heaths and is answerable for the plant's distinctive name, is one of the loveliest of the whole genus, while the dwarf-growing *A. dumosus* and *A. diffusus horizontalis*, the latter one of the oldest favourites in cottage gardens, with spreading branches densely set with small maroon and white flowers, though not possessing the attractions of the earlier-mentioned varieties, should find a place in representative collections. Starworts of the *Novae-Angliae* section are scarcely so decorative as those of the *Novi-Belgii* race, since their foliage is denser and their flowers produced in less abundance. Their blossoms are of various shades of purple and dull red, the most striking

varieties being *Melpomene*, deep purple, and *ruber*, rosy-crimson. *A. grandiflorus* can scarcely be classed as a September flower, since even during dry seasons in sunny gardens in the south-west it rarely expands its earliest blossoms before the concluding days of the month, and is seldom at its best much before the close of October. It is, however, an extremely handsome plant, some of its violet-purple, golden-centred blooms attaining a diameter of over 2 inches, and remaining in beauty, should frost not supervene, until the middle of November. *Aster (Chrysocoma) lino-syris*, a plant that is found wild in some parts of South Devon, and which is popularly known by the title of *Goldilocks*, is a particularly useful autumnal subject, producing dense terminal corymbs of bright yellow flowers, and is often to be met with in cottage gardens, though rarely to be found in the herbaceous border.

When Starworts are used for indoor decoration it is advisable to split up the stems to a length of 4 inches or so with a sharp knife, dividing the stalks into four sections before placing them in water, as when so treated they are enabled to absorb more moisture and to retain their freshness for a far longer period than if this precaution has not been taken. S. W. F.

RAISING BIENNIALS.

OWING to the dry summer and want of water I could not sow the biennial seeds in June and July, such as *Hollyhocks*, *Canterbury Bells*, *Antirrhinums*, &c., for blooming next summer. Can I sow them outdoors now, or would it be better to do so now under glass and let the seedlings winter in a cold house (which has no heat any time in the winter), or should I sow them in heat in February and harden off in May and plant out? In this latter case, will they bloom in the summer of year they are sown?—BEESWING.

* * Some of the biennial flowering plants may be sown in the early part of the year, and will flower the same year somewhat later than they would if sown in the ordinary way during the previous autumn. Of those mentioned by "Beeswing" the *Antirrhinums* and *Hollyhocks* would do well, but the *Canterbury Bells* would not be worth troubling about, and it would be in their case preferable to buy in young plants, which may be got cheaply enough from many nurserymen. *Hollyhocks* require the best of attention to raise and flower them in the same year, but they deserve all the trouble, and many gardeners who have been troubled with the *Hollyhock* disease have adopted the system during the past few years and have had the satisfaction of seeing their plants so raised entirely free from the unsightly fungus which formerly made *Hollyhock* culture a misery. We should not advise "Beeswing" to sow now, especially as he appears to have command of some heat from February onward. The better way would be to sow in heat as early as possible after the turn of the year and to keep the young seedlings growing as freely as possible in a temperature of about 65°. When the young plants are ready, prick them off round the edges of 5 inch pots filled with good soil, and later on pot them singly into 3 inch pots. When the roots have got established in these, gradually harden the plants till it is safe to put them into a cold frame, which should be protected from frost at night, and in May put out where the plants are to flower, giving them a good rich soil. Protect the young plants, if necessary, by putting an inverted flower-pot over each on frosty nights. This protection will not be needful for long, but is a great help at first. A sharp look-out must be kept for green fly, as this, if allowed to establish itself, will entirely cripple the young plants.

The *Antirrhinums* may be raised in the same way, but it is not necessary to pot these off singly; they may be pricked off thinly into boxes of light soil, and soon develop into nice plants that will flower freely up to the end of autumn. If seeds of either of the above plants are bought from a reliable firm, the percentage of poor flowers will be very small indeed, and the rest will make a fine display.—ED.

STOVE AND GREENHOUSE.

ACACIAS IN CALIFORNIA.

ALTHOUGH the leading species of Acacias have been grown in California quite as long as the Eucalypti, they are far from being so popular among planters, and one never sees large areas set to these valuable trees. If California did not have extensive forests of Tan-bark Oaks and deserts abounding in Canaigre, the tannin-yielding Wattles would be more often planted. The rapidity of growth, under favourable conditions, of *Acacia decurrens* is surprising, particularly to those who know the Acacias only as greenhouse shrubs. The illustration shows a tree growing at the Southern California sub-station near Pomona, Los Angeles County, conducted by the State University. This tree was raised from seed sown in 1893, and was photographed in 1898. It was therefore five years old and had stood four years, being removed from the nursery at one year. Its height is more than 30 feet. It has received no irrigation; the amount of annual rainfall has varied from 12 inches to 18 inches. Acacias are being planted more freely in recent years, since they are so ornamental in bloom, and the timber is found useful for many purposes. In time they will doubtless form a striking feature of our landscapes.

CHAS. H. SHINN.

FREESIAS FAILING.

I AM sending you some Freesia bulbs which have gone quite hard. Every summer the bulbs are left in their pots, which are put into a cool greenhouse near the glass to bake all summer. They have then in September been repotted and have bloomed magnificently, but after this hot summer, when they were shaken out of the earth, they were quite hard. Why is this? Several gardeners around have found the same. The soil in the pots is never watered in the summer, but allowed to bake hard. I have never failed before.

—BEESWING.

. If the Freesia bulbs sent with this query were a fair sample of the stock, they had never really finished their growth, as they were perfectly smooth and without wrinkles such as well-developed bulbs, whether large or small, have. The probabilities are that the drying off was commenced too soon after flowering, the result being a sudden check to growth; the bulbs being then in a soft and unfinished state could not stand the severe baking to which they were subjected during the past long and hot summer. I have never met with a similar case and have never been able to over-bake Freesia bulbs with sun heat, but then I have always been careful to allow growth to be complete before reducing the water supply, after which no harm comes to them, and the more baking they get the more certain they are to flower. The bulbs sent were quite dead, and I can compare them to nothing but pieces of soapstone or of exceptionally hard prepared chalk. On them can be discerned through the microscope a few very minute brown spots that look like the spores of some fungi, but these appear to me to be the result, and not the cause, of death. The bulbs appear quite mummified. Fortunately, Freesia bulbs are now very cheap, and "Beeswing" can easily make good his loss, but flowers from bulbs potted up now will be late and not so fine as those from bulbs potted up in August. I should advise care in the early stages of ripening and care also in choice of soil to see that it contains no fungoid growth. I have been particularly successful with bulbs grown in half loam and a quarter each of river sand and dried cow manure, the latter rubbed up fine. —CORNUBIAN.

Begonia Gloire de Lorraine.—In spite of this most useful winter-flowering Begonia being infertile, it is very certain that the type is not

fixed, and that it either sports or else the stock sent out by the raiser was the result of many seedlings from the same cross. I saw recently Mr. Hudson's plants of the new variety Mrs. Leopold de Rothschild, which recently gained an award of merit from the Royal Horticultural Society, grouped in a house also containing a similar number of plants of the dark variety, which must be, I suppose, taken as the true type. The difference was most marked, and at that time was all in favour of the new variety, as the flowers were larger, and in colour a nearer approach to pink. It may not prove so showy for midwinter, as it will naturally be paler then, but a batch of it for early flowering will be very useful, and to many people the elimination of the magenta tinge will be considered a great im-

provement. I do not know what may be the experience of others, but from the stock here I could select three, and probably more, varieties that would appear perfectly distinct if grown in bulk and stood side by side. The lightest coloured forms of each batch, consisting of plants of the same age, come first into flower. —J. C. TALLACK.



Acacia decurrens in California—five years from seed. From a photograph by Prof. C. H. Shinn, Berkeley, California.

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Allamanda Hendersoni.—This plant makes a most effective climber if a stove heat and ample room be given it. I met with a remarkable plant of it at Bramley Park the other day. The specimen has been growing a number of years and covers the whole of the wirework the length of a

HOUSING TREE CARNATIONS.

I GREW winter-flowering Carnations for many years, and always found it of the utmost importance to protect the plants from heavy, soaking rains in autumn. If the ball once becomes

thoroughly soddened, it frequently in the case of plants in, say, 8-inch or 9-inch pots, and which are not in a semi-root-bound condition, takes several weeks for them to again become dry. In the interval, what is known amongst Carnation growers as the yellows attacks the growth, and from which they very rarely thoroughly recover. The knowledge of this induces some to house their plants full early, but sooner than do this I would lay the plants on their sides in stormy weather, as I think the first week in October quite soon enough to get them into their winter quarters—at least, in midland and southern counties. Frequently the plants do not receive sufficient attention after being placed under glass, but if the weather is dry and sunny, or even windy, the atmosphere becomes too arid and a considerable check is given. Where the plants are elevated on wooden stages in the old-fashioned way, frequent damping of floors and stages should be practised throughout October, and on bright, sunny days overhead syringings as well. From November till February the soil in the pots will supply sufficient atmospheric moisture. Market growers, however—and I think they are right—prefer low houses furnished with slate or wooden benches, these being covered with sifted coal ashes. In such a position the plants can be kept in a growing condition, as the ashes retain the moisture, and in such structures evaporation is slow. Another important matter is fumigation. The plants should be fumigated twice mildly whether aphid is visible or not. The plants also should, if practicable, be watered by one man, and, provided they are not

pot-bound, manures of any kind are best avoided. Later on, when the plants are opening their flowers freely, liquid manure the colour of pale ale may be given at every alternate watering.

C. B. N.

LILY OF THE VALLEY.

THE time will soon arrive when those who require an early supply of Lily of the Valley will have to place the crowns in heat. Much annoyance is caused by the crowns either refusing to start or by a sudden collapse of the growth when half completed. Very often the failure is attributed to an immature condition of the crowns, but I

think more frequently the cause lies in a fluctuating bottom-heat. A bottom-heat which is one temperature to-day and another to-morrow has not calculated to produce satisfactory batches of Lily of the Valley. Many a good lot of crowns is spoiled by being plunged in a bed of leaves and manure, which retains a heat of, perhaps, 80° or 90° for ten days or so, and then suddenly falls to 65° or 70°. The former figure should be maintained from the time the crowns are plunged until the flower-spikes are well advanced. For many years I succeeded well with early batches by placing a thin board over an evaporating pan of the hot-water pipes in a Pine stove, standing the pots on this and packing Moss firmly around and between them. An inverted pot was placed on each of those containing the crowns, and water given at a temperature of 95° every morning, as if the soil once became dry, failure followed. Under those conditions I seldom had a patchy lot, as the temperature remained unchanged from first to last. I allowed the inverted pots to remain on until the lowermost bells expanded, when the plants were removed to a warm house to finish opening. When once fully out, the flowers last much longer in a temperature of, say, 55° or 60°. As regards open-air culture, many beds fail through being literally starved. This flower requires good drainage, but it is very easy to add too much leaf-mould and light soil to the beds when forming them. Some of the best crowns are grown in Norfolk, and a good deal of cow manure is used. A friend of mine in that county allows plenty of room between the rows, and the second season a furrow is made with a special tool between each row, this being filled in with cow manure, which is trodden in firmly and the soil again placed on. The roots of the Lilies rush into this larder very eagerly, fine foliage and crowns resulting. Mulching and watering are also regularly and liberally followed up in dry summers. I was informed by my friend that a most important point in open-air culture is keeping the crowns well above ground, so that they may become thoroughly matured by sun and air. As a rule, the longer the crowns rest, the better they start away when forced. J. B. S.

SEPTEMBER IN SOUTH DEVON.

THIS year the month of September has shown few signs of the advent of autumn. Even in the concluding days of the month the verdant foliage of the trees gave but sparse hints of the gorgeous transfiguration that will shortly illumine the woodland groves, though here and there the leaves of the Limes have assumed a pale tint that borders on yellow, and an occasional Chestnut fan shows a ruddy stain. The Mountain Ashes are bright with their scarlet berry-clusters, and a red glow, that will increase in brilliance as the leaves fall, is stealing along the hedgerows from the crimsoning hedges that in countless thousands stud the Thorn bushes. The Holly berries, of which this year there is an unwonted profusion, are turning from green to scarlet, and the feathery trails of the Traveller's Joy are slowly assuming a smoke-grey tint, but the foliage of the Brambles, studded with profuse clusters of Blackberries of all shades of colour, from greenish-red to sable, still shows an uniform green hue, flecked here and there with occasional maroon-spotted, yellowed leaves, but evidencing no signs of changing its tint for the purple-black and crimson that precede the falling leaf. Swallows and martins have remained in considerable numbers throughout the month, and were to be seen each day hawking the fields in pursuit of their rapidly diminishing food-supply, for during the latter half of the month a decided fall in the temperature suggested the commencement of fires in the living-rooms. On the last day of September I noticed 23 swallows collected on a short length of telegraph wire, so that it is probable that before many days their numbers will be materially diminished. Although insect life has generally proved abundant during the summer and autumn and another "clouded yellow

year" has occurred, *Colias edusa* being unusually common, the absence of wasps has been remarkable, their numbers, even where ripe fruit was present in quantity, being reckoned by units instead of by the usual scores and hundreds. The high lands of Dartmoor have presented a glorious pageant of purple and gold—breadths of purple Heather and acres upon acres of golden Gorse—colours that merge and grow less definite as they recede into the distance, melting afar into the infinite blue of the atmosphere or losing their distinctive hues beneath the lawny mist-wreaths that veil the tors. Fine autumnal colour-effects are obtainable by the grouping together of flowers of varied shades of yellow and red. One such border presented a brilliant display in mid-September. At the back stood masses of perennial Sunflowers and scarlet Cactus Dahlias, while double African Marigolds, ranging in colour from rich orange to pale lemon, occupied the middle distance, and in the foreground scarlet tuberous Begonias and the golden *Aster linoxyris* were flowering. A fair amount of rain has fallen during the month, but bright, sunny days have largely preponderated, and September has been a far preferable month to the corresponding period of 1896, when only two out of the thirty days were rainless. In the matter of wind, September has also been fortunate, no gales having been experienced throughout its duration.

In the garden, *Achillea ptarmica* fl.-pl. The Pearl has continued to bear its sprays of clustering white blossoms, while the picture produced by the arching leaves and tall flower-rods of the great *Acanthus* has lost none of its nobility of form. The so-called blue Paris Daisy (*Agathaea cœlestis*) has been starred with its soft blue flowers, and the high bank that, for a length of 15 yards or more, the Sweet Alyssum has veiled with a cloud of countless white blossoms has filled the surrounding air with the fragrance of honey. Large plants of *Anemone japonica alba* Honore Jobert have been white with their single gold-centred flowers through the greater part of the month, a particularly pleasing colour-effect being produced in one case where the purity of the snowy blossoms was enhanced by the crimsoning leaves of a Virginian Creeper that clothed the southern wall immediately behind. The pale flesh-pink variety of this *Anemone* is also a most attractive flower, but the magenta-red type, at one time the only form known in the flower garden, is of a singularly unpleasing tint. The white variety is invaluable for indoor decoration, the simple flowers associating charmingly with other subjects in bloom at the same season, either in the way of decided contrasts, as with *Lobelia fulgens*, *Salvia patens* or *Montbretias*, or with the soft yellow of the Paris Daisy and the flower-lace of *Gypsophila paniculata*. The

Tuberous Begonias have provided one of the most brilliant effects of the month with their vivid colouring, while the spreading foliage has effectually concealed every particle of the underlying soil. At the commencement of the month *Amaryllis blanda*, the green-stemmed form of *A. Belladonna*, was in bloom, followed a fortnight later by the type. As a rule, the former variety bears a greater number of flowers on a scape than *A. Belladonna* and produces longer flower-stems; the variety *rosea perfecta* has also been in flower in a neighbouring garden. Some of the dwarf *Campanulas* have borne a few blossoms, and *C. pyramidalis* was still in flower in the early days of September. The large-flowered *Cannas*, although yet producing bloom-spikes, have lost something of the brilliance that distinguished their colonies during the preceding month, but the Marguerite Carnations with their blue-green leafage and varied tints have created increasingly harmonious pictures in many gardens. *Chelone barbata* and *C. mexicana* were in flower at the beginning of the month, followed later on by the purple-blossomed *C. Lyoni*. On railway embankments and cliff ledges the Valerian (*Centranthus ruber*) in its three colours of pink, deep red, and white has been flowering, and the early Chrysanthemums are in full beauty

in beds and borders. The so-called autumn Crocuses are in flower, *Colchicum autumnale* having a pretty effect on the grass, while the purple-red *C. speciosum* makes a spot of soft colour. Late sowings of the Cornflower and annual *Coreopsis* are still brightening the garden, and large bushes of the white *Cosmos bipinnatus* are starred with their refined flowers. *Crinum capense*, *C. Powellii*, *C. P. album*, and *C. Moorei* have been in bloom in various gardens, as well as the white variety of *C. Moorei*, known on the Continent as *C. Schmidtii*, and *Crocus speciosus* has commenced to expand its violet-purple blossoms.

Cactus Dahlias have provided a brilliant display. New varieties of these handsome flowers are certificated with such liberality, however, as to render it almost impossible for amateurs to keep abreast of the times in the matter of innovations, many of which, moreover, will be found to exhibit little, if any, advance on older varieties. Green's White gives promise of taking the lead in that colour, and the large and brilliant Red Rover, though not certificated, should certainly prove a gain to the garden. In sheltered nooks hardy *Cyclamens* are blossoming profusely, and here and there secondary blue flower-spikes may be seen on the Delphiniums or a large, tall-stemmed golden star on the *Doronicum* clumps. *Erigeron speciosus*, after many months of blossoming, still holds some pale mauve golden-centred blooms, and the Mexican Daisy (*Erigeron mucronatus*) is thick with flower. The *Eschscholtzias* are bright in hanging rockeries, and the Coral Tree (*Erythrina crista-galli*) was bearing its long crimson-flowered spikes at the commencement of September. Hardy Fuchsias, such as *F. gracilis* and *F. Riccartoni*, in cottage gardens have presented lovely pictures during the month, the bushes in some cases being 9 feet or 10 feet in height and as much as 6 feet or 8 feet in diameter. Every arching shoot is thickly strung with the drooping crimson flowers, and in the bright sunshine the great bushes glow at a little distance with surpassing brilliance. *Funkia grandiflora* has borne its large-flowered white bloom-heads, and *Gaillardias*, *Gazanias*, and scarlet Geums have given colour to the borders. The Cape Hyacinth (*Galetia candicans*) was still bearing its tall spires of pendent ivory-white bells in the early days of September, while towards the close of the month the *Gerbera* produced a second display of orange-scarlet bloom. *Hedysarum multijugum* has been in flower, and in sunny positions *Hedychium Gardnerianum* has borne its scented yellow flower-spikes. This plant will, as a rule, pass through the winter in the open ground in the south-west, but under such circumstances rarely perfects its blossoms sufficiently early in the year, except in situations conducive to early maturation. The

Perennial Sunflowers are at their best in September, and create splendid breaks of bright gold where grown in large masses. *Helianthus rigidus* Miss Mellish and *H. latiflorus* are amongst the finest varieties of the month, and the pale yellow *H. giganteus*, lifting its tall flower-heads to a height of 8 feet or 9 feet, is extremely effective when thrown into high relief by a verdant background. Annual Sunflowers and Hollyhocks, though for the most part past their best, are still ornamental in cottage gardens here and there, where *Helichrysms* occasionally create a bright spot of colour. The Heliotrope plants are covered with blossom and the surrounding air is heavy with their incense. *Hunnemannia fumarifolia* has produced its handsome golden Poppy-like flowers above its glaucous foliage, and appears tolerably hardy in sheltered gardens. Though introduced seventy years ago, it is rarely seen in cultivation. Hydrangeas have provided delightful effects throughout the month, giant bushes laden with their massive blossoms, in many cases Forget-me-not blue in colour, bordering shrubberies, flanking wooded drives, or mantling stiff cliff verges with lavish wealth of flower. *Hypericum Moserianum* has also been in bloom, and the Torch Lilies (*Kniphofia*) have made breadths of

vivid colour with their scarlet spear-heads. *Lobelia fulgens* has borne its tall flower spires of intense vermilion, and *L. rosea* its softer-tinted blossoms. The common Marigolds (*Calendula*) and French Marigolds (*Tagetes*) have been brilliant with their varied shades of yellow, and *Matricaria inodora* fl. pl. has had its Fennel-like foliage smothered with double white flowers. Early in the month the

Montbretias were displaying their orange-scarlet flower-scapes, *Etoile de Feu* being one of the most brilliant of the named varieties. Late-sown plants of the sweet-scented Tobacco (*Nicotiana affinis*) are still effective in the garden, and *Oenothera Lamareckiana* continues to produce its widespread yellow blossoms. Tufted Pansies are also still in bloom, and are at the present time in far better condition than was the case at the same period of the two preceding seasons; and the Paris Daisies (yellow and white) are bearing flowers, though not with the profusion that marked the months of July and August. Ivy-leaved Pelargoniums have afforded a marvellous display during the summer and early autumn, as with three mild winters in succession many old plants have made prodigious growth. As a rule, where large masses of these subjects are seen clothing a wall with bloom, they consist of the shell-pink variety known as *Mme. Crouse*, the flower-trusses of which when borne in profusion over an extent of wall create charming breadths of soft colour. In one case this Pelargonium had run up the south-western angle of a creeper-clad house and covered it from eaves to ground level, a height of over 25 feet, with a veil of blossom, while many other instances have occurred in the south-west where sheets of flower from 10 feet to 15 feet in height have been formed by the same plants. Pentstemons have been in bloom throughout the month, and *Phygelius capensis* bore its tall spikes set with drooping scarlet flowers during its earlier days, at which time the herbaceous Phloxes had not entirely concluded their season of brightness, and the annual Phlox Drummondii had lost but little of its rich colouring.

The Winter Cherries (*Physalis Alkekengi* and the later-introduced *P. Franchetti*, with its enormous orange-scarlet, glistening calyces) have assumed their brilliant autumnal hues and will soon be ready for cutting for winter decoration, an operation that should be performed before the calyces are injured by heavy rains and gales if they are to preserve their beauty intact through the winter months. If the stems are left uncut, the calyces usually become skeletonised by the ensuing spring. The leaves should be removed as soon as the stems are cut, as they soon wither, but the calyx-studded stems associate charmingly with dried grasses, autumn-tinted Bracken, feathery trails of Traveller's Joy, Ivy, or other dark foliage, and retain their fresh appearance for many months. The soft blue of *Plumbago Lar-pentæ* is apparent on all sides. The plant grows like a weed in the south-west and seems totally indifferent as to the character of the soil in which it is planted, flourishing alike in heavy and light staple and in damp and dry situations. At this period of the year it presents a particularly pleasing aspect, clothing rockeries with foliage that has partially assumed a reddish bronze tint, and which is liberally besprinkled with its blue flower-heads. *Polygonum capitatum* has been covered with its dense pink bloom-spikes, and *Pyrethrum uliginosum* has borne in profusion its narrow-rayed white stars on tall flower-stems.

Roses, though not so plentiful in September as in June and July, are by no means things of the past. The Hybrid Perpetuals, belying their name, can scarcely be considered satisfactory autumnal bloomers, though they provide a fair scattering of flowers, the old favourite General Jacqueminot being one of the most prolific at this season of the year. Teas and Hybrid Teas have, however, borne an ample display of blossoms, Safrano being especially noticeable in this respect, though these naturally lack the size of the earlier crop, but the China Roses have proved the most free-flowering of the family, the salmon-

pink Laurette Messimy being particularly decorative, while Queen Mab, Irene Watts, and Souvenir de L. Guillet, with their subtle colour gradations of scarlet, rose, apricot, chrome shell-pink, and allied tints, have afforded many delightful blooms, and the old Fellenberg has been smothered in flower. The single white Macartney Rose is one of the loveliest of autumn flowers, and expands its chaste, delicately-scented blossoms without intermission until the advent of the first frost. The individual flowers are about 4 inches in diameter, and are produced in continuous succession from mid-July onwards, two or three dozen often being open simultaneously on a large plant. *Rudbeckia Newmanii*, *R. nitida*, and *R. purpurea* have been in bloom, and the *Salpiglossis* has displayed its gorgeous shot-silk colouring. The deep blue of *Salvia patens* has been a feature of the garden, while *S. fulgens* and *S. coccinea* have borne their scarlet and crimson flowers, as have specimens of *S. rutilans* which were planted out from pots in May. This subject, sometimes termed the Pine-apple *Salvia* on account of the strange resemblance borne by the aroma of its leaves to that fruit, will often exist in the open through the winter, but in such a case rarely matures its blossoms. Old plants of *S. fulgens* and *S. coccinea*, however, that have been growing in the open for some seasons flower yearly during the autumn months. *Scabiosa caucasica* has borne its pale blue flowers on spring-sown seedlings, and *Sedum Sieboldii* and *Senecio pulcher* have been in bloom, as has the Golden Rod (*Solidago ambigua*), a handsome plant when massed in the wild garden.

Sternbergia lutea, the Winter Daffodil, has produced its golden flowers, and *S. macrantha* in Mr. Archer-Hind's garden at Coombe-fishacre has thrown up large golden blooms almost Tulip-like in size. *Stokesia cyanea* has perfected its purple blossoms not very dissimilar from those of the single Aster (*Callistephus*), but lacking the yellow eye of the latter. Why, by the way, is the beautiful single Aster rarely or never seen in the gardens of to-day? In its form and colouring it leaves little to be desired, but, like the single scarlet *Ranunculus asiaticus*, another lovely flower, it has been "improved," until in the multitude of double forms the single and far more graceful type has been entirely lost to sight. Late-sown Sweet Peas and Sweet Sultans have been in flower during the month, as have *Tradescantia virginica* and *Tritonia aurea*. Violets are commencing to blossom in some quantity, and in this district the plants have suffered less from the red spider pest during the past season than they did in 1898, thus proving that the occasional heavy thunder-showers considerably mitigated the effects of a dry summer. *Zauschneria californica* is bearing its vermilion flowers, and *Zephyranthes Atamasco* and *Z. candida* have been in bloom in a neighbouring garden. There being some doubt as to whether the former was correctly named, flowers were submitted to Kew and the nomenclature authenticated. S. W. F.

Torquay.

A useful glasshouse.—It is not in every garden that a convenient range of glasshouses is found. Where such exists it is a comparatively easy matter to secure successional supplies of fruit and flowers. Often, however, very good results may be achieved by a little forethought in the internal arrangement. One of the most useful structures that has ever come under my notice was a rather lofty lean-to, having lights some 3 feet long, slanting from the top of the house at the back, these serving as ventilators, and of course admitting a good deal of extra light to the back wall. Trained to the wall are various kinds of Figs planted in narrow boxes. These, after reaching the top of the wall, are allowed to travel a short distance down the main roof facing the south, being secured to wires. Good crops were secured from these trees, the fruit being gathered from the top of the slanting stage which occupied the body of the house. In each corner of the house near to the front lights another slate

box was fixed, a Peach being planted in one and a Nectarine in the other, these being trained to a trellis over the pathways at each end of the stage. During winter, when the fruit trees were at rest, the stage was filled with Tree Carnations, the smaller sideshelves being furnished with Primulas, Cyclamens and Solanums. In spring, when the Carnations were past and the cuttings taken, the stage was cleared and refilled with Tea Roses, which in their turn were placed in cooler quarters to harden off, pot Figs being then taken in to fill their place. A stout shelf along the front of the house accommodated a row of early pot Tomatoes, the plants being trained to a temporary trellis suspended on hooks over the front pathway some 15 inches from the glass. The various arrangements here described might be profitably imitated in many places lacking space and convenience.—GROWER.

KITCHEN GARDEN.

VEGETABLE REFUSE FOR PEAS.

EVERYONE knows that the past season has been a very trying one for Peas, especially on light soils. In a garden where the natural staple is very porous I was surprised to find some of the heaviest crops I have ever seen; Duchess of Albany and Autocrat especially were grand. The gardener told me that he could not get any manure, but had to rely entirely on leaf-mould and decayed vegetable matter generally. He made a practice of collecting all the leaves he could. These were kept one year, turned over in the winter and mixed with lawn sweepings and other things. In the winter, trenches were taken out and a liberal amount of this mixture put into the bottom, so that by the time the Peas came into bloom their roots began to take possession of this store of good food. In very light soils I believe this to be the best way of growing Peas, as the roots are tempted to go deeper and are thus more out of harm's way in a time of severe drought. Probably partly decayed vegetable matter is more enticing to the roots than is rank manure when buried some depth in the ground. I am inclined to think that raw manure is not always so beneficial as is commonly supposed. I have noticed that when heavy dressings are applied in spring the effect, especially in a dry summer, is not nearly so marked as one might imagine would be the case. Quite raw manure is never acceptable to plants; it must in some way be acted on by earthy or atmospheric influences before roots will travel freely in it. Not only is this the case, but fresh manure can never be finely subdivided, but goes into the ground in lumps, so that many of the roots have to travel some distance before they find any benefit from it. In the case of an esculent which requires such a great amount of food and which is so liable to failure through lack of strength to resist climatic vicissitudes, it is important that plenty of food in a form that is of easy assimilation should be at the disposal of the roots from the time the flowers are formed. It is just at that period that Peas are apt to go wrong, and it often taxes the grower's ingenuity to discover the cause of failure. The primary cause in most cases would, I think, be found in defective nutrition, either caused by the soil not having been sufficiently worked or by a deficiency of food of the right kind. I know of one garden where vegetables of most kinds are remarkably well grown, and it is the gardener's boast that he hardly ever uses manure. In this garden, which is an extensive one, a large amount of decaying vegetable matter is annually collected, and fires are from time to time made to char branches of deciduous and evergreen trees and shrubs. In this way there is every spring a big

heap of decayed and charred matter at disposal, which can be liberally used for the Pea crops, which in this garden constitute an important feature. In the case of Peas, I am inclined to think that the system pursued by some farmers for Mangold Wurtzel would be beneficial. They give a liberal dressing of manure in November, ploughing it in, but not deeply. In April the land is cross-ploughed, so that the manure which has been acted on by the soil during the winter is broken up into small bits. Another coat of manure is then applied and ploughed in, and the land is ready for a crop. It stands to reason that in this way the young plants feel the benefits of the manure from the very commencement of their life, and as a fact fine crops are raised by this method. J. C. B.

Late Celery.—From the second week to the middle of November is a good date to give the latest rows intended for blanching the final earthing up. Where work is pressing, earthing up may in light, warm soils be postponed for ten days or so, provided the weather remains open. If the work is neglected beyond the date named on strong soils, repeated heavy rains may get it into a sticky condition, rendering earthing-up difficult. I like to choose a dry, windy day for earthing up these late rows, as the plants in these if fairly stout are often more serviceable than earlier blanched batches, as growth being slower and longer exposed to frost and wind, the tissues are harder, standing wet better, and being less liable to rot. Where, as is sometimes the case in very large gardens, a few short rows of late-planted stock remain unblanched for flavouring, they will take no harm if protected with straw or Bracken in case of severe frost.—C.

NOTES ON TOMATOES.

WE have to thank our many correspondents throughout the country for kindly replying to the following queries submitted to them, and trust the information given will be of service to our readers:—

- (1) Which do you consider the best Tomatoes, new or old, taking into account freedom of setting and flavour?
- (2) What do you consider the best outdoor kind?
- (3) The best kind for winter and early spring crops?
- (4) Do you consider a Tomato a fruit or a vegetable?

— Ham Green Favourite and Frogmore Selected are, I consider, the best Tomatoes for general use that I have grown. Chemin Rouge is the best for outdoor cultivation, and All the Year Round for winter. I consider the Tomato a fruit, but for exhibition I prefer it to be classed amongst vegetables.—THOS. COOMBER, *The Hendre Gardens, Monmouth.*

— I consider Perfection the best Tomato. It is of a very handsome shape, of first-class quality, and a good setter. It is also good for outdoor crops and fairly early. I grew Perfection Tomato last year (1898) over 2 lbs. in weight. I had a good many 1 lb. each outdoors on a south wall. I consider the Tomato a vegetable.—R. J. CARTER, *Wiveliscombe.*

— The sweetest Tomato I grow is The Peach (probably too sweet as a Tomato for some palates); next to it comes Peach Blow, a dash of the flavour of Perfection infused into The Peach; Golden Nugget and Horsford's Prelude come next. The four are heavy croppers. I find but little difference in the way of flavour among what I term cookers—The Old Red, Challenger, and Perfection types—under whatever name they appear. Scarlet Queen is distinct and of good quality, but I must give it another season's trial ere I pass a definite verdict. Of course, strictly speaking, a Tomato is a fruit; but I am not qualified to pass an opinion

as to whether it should be admitted as such in collections of fruits, &c., at exhibitions, or left to grace the vegetable table as hitherto. I have been inclined to the latter course.—JNO. ROBERTS, *The Gardens, Tan-y-bwlch, R.S.O., North Wales.*

— The season so far has suited Tomatoes, both indoors, on walls, and in the open. Up-to-date is the favourite variety for indoor and outdoor culture. It is very hardy, sets freely, commencing low down near the ground, and is an enormous bearer. Twenty to twenty-six Tomatoes I have seen repeatedly in clusters. It is also a great favourite with those who sell Tomatoes. It is of good colour and flavour, thin-skinned, and takes five or six to the pound weight. Where hundreds of customers go in and ask for half-pounds and pounds this is a great point in its favour. A Tomato that grows large is not wanted. Growers will find the medium ones the most in demand. Golden Jubilee I like immensely. I think it quite the best Tomato I ever tasted either in the salad bowl or grilled. Its appearance is very taking either growing or in the shop window, or when served up it gives variety either cooked or for a separate salad-bowl. The Tomato is a cooking fruit, and is as out of place in a collection of dessert fruits as would be a dish of ripe Capsicums.—WM. ALLAN, *Guntton Park.*

— In answer to your question, "Do you consider the Tomato a fruit or a vegetable?" I consider the Tomato as much a fruit as a Gooseberry or a Melon, but it is not a dessert fruit in the same sense that Grapes, Peaches, Plums, and Melons are, and it will never become popular as such, even with the most advanced acquired tastes. I have a variety which I raised here some time since, and I grow no other for indoors and outside.—A. PETTIGREW, *Castle Gardens, Cardiff.*

— The best Tomato I consider is Best of All. Next I am in favour of Ham Green Favourite. The best outdoor kinds are Laxton's Open Air and Sutton's Abundance. I find Earliest of All the best winter and early spring variety. I consider the Tomato a vegetable.—G. H. PARRATT, *Bradgate Park Gardens, Leicester.*

— Early Prolific, Leicester Red, Crimson King, and Up-to-date I find satisfactory in every detail. Outdoor Tomatoes are plentiful as regards varieties, &c., but after many trials of various kinds I am well pleased with Early Prolific, being a very free setter and all you can desire as regards flavour. To succeed this for a second crop Crimson King is a very fine fruit both in flavour and size. I had last year from the open plenty of trusses with eight and nine fine fruits, many of them 1 lb. in weight. I consider the Tomato a vegetable.—H. WAGG, *Ossington Gardens, Newark.*

— To some tastes the Tomato has an agreeable flavour eaten raw as dessert; to these it is a fruit. Others enjoy it cooked in various ways, but dislike it in a raw state; to such it is a vegetable. If I were judge at a fruit show and there was a prize for a collection of twelve varieties of fruit and one of these Tomato, I do not think I should be justified in withholding a prize in consequence; but, suppose there was another collection, eleven dishes equally as good as the other, and one dish of Gooseberries instead of the Tomatoes, then I think the collection with the Gooseberries should receive the prize. I consider Conference, Chemin, and Duke of York the best early varieties, and a good selection of Hackwood Park and Ham Green Favourite the best Tomatoes for general crop.—W. O., *Fota.*

— I grow Frogmore Selected, Perfection, Chemin Rouge and White's Majestic. I find the first and third best for spring or winter work and set freely. I consider the Tomato a vegetable, as it hardly comes into line with dessert fruits in my opinion, which are chiefly of a sweet nature.—W. CRUMP, *Madresfield Court, Great Malvern.*

— I am growing Satisfaction and Frogmore Selected. The latter grows too tall for house work. I like my own selection better than any I have tried. It is a dwarf grower, free setter, and grows better than any I have tried both inside and out of doors. The colour is not quite so good

as in Frogmore, but I am getting that well up to the mark. The above I find to be the best for all purposes. Wherever I go judging, Tomatoes are shown in a collection of vegetables, and classes are given for Tomatoes, but never have I seen them shown as fruit.—WM. WHALLEY, *Addington Park, Croydon.*

— It seems to me that there are far too many so-called distinct varieties of the Tomato. Sutton's Best of All has proved itself in these gardens to be the best of all doers—it is of fine flavour, fine appearance, both in form and colour, and an abundant cropper. It grows with me about 8 feet high under glass. For a short run of say about 3 feet I have found nothing to equal Maincrop for quality and quantity. Best of All being of better appearance, I prefer it in houses when space will permit for it to grow away. For winter and early spring I should prefer Earliest of All. The Tomato is a fruit, but probably owing to its adaptability to being consumed in every shape and form, is more popular as a vegetable. I consider Best of All and A I Tomato equally as good for outdoor culture, and would prefer them for south walls; but for the open I like Maincrop, on account of its dwarf and sturdy habit, free-bearing and fine flavour.—T. PLUMB, *Shobdon Court, Herefordshire.*

— The present season has been very favourable for Tomatoes. My choice for general purposes indoors and out, is Earliest of All, Conference, Challenger, and Hackwood Park, which are hard to beat. I look upon the Tomato as being as much a fruit as a Peach or Nectarine. It frequently forms a dish on the dessert table, and I know many prefer Tomatoes to any other choice fruit.—W. SANGWIN, *Trelissick, Truro.*

GARDEN FLORA.

PLATE 1246.

CLIVIA MINIATA CITRINA.

(WITH A COLOURED PLATE.*)

BEFORE the introduction of this new variety from Zululand we had only the Natal type, which has reddish orange flowers tinged with yellow on the lower half of the segments. This has been in cultivation nearly fifty years. According to Mr. Baker, it was introduced by Messrs. Backhouse and Sons in 1854, when a figure of it was published in the *Botanical Magazine* (t. 4783). Since that period many seedlings, more or less differing in the shade of red and form of the flowers, have been raised in English and continental gardens, and there are now numerous named sorts. A comparison of some of them with the type as represented in the figure above cited will show how little variation has so far been obtained. Much of the so-called variety of size and colour is due to cultural conditions. I have seen twenty named varieties grown together for two or three years, and at the end of that time they were all alike —C. *miniata* simply.

In THE GARDEN, vol. xxi., p. 358, along with a plate of Marie Reimers, the best seedling form of that period, will be found an excellent article by Mr. James O'Brien on these plants (there called *Imantophyllums*), in which it is stated that about fifteen years after the introduction of the type by Messrs. Backhouse a variety called *superba* or *maxima* was imported, presumably from S. Africa, by the late Mr. Wilson Saunders, and that progress in breeding new varieties may be said to date from the advent of that variety, which differed from the type in having the flower segments almost white at the base.

It is probable that the distribution of C.

* Drawn for THE GARDEN in Mrs. Powys Rogers' garden at Burgoose, Perranwell, by H. G. Moon. Lithographed and printed by J. L. Goffart.



miniata extends considerably beyond the limits of Natal, and that colour variations of it will continue to be found as the countries adjacent to Natal become more explored. That such may be the case is seen in the appearance of this entirely new variety from Zululand, where it is said to have been collected wild by Captain Mansell, and first flowered by Mrs. Powys Rogers, of Perranwell, in 1897. It had, however, been sent previously to Kew by the Rev. W. H. Bowden, of Bow, North Devon, who had also obtained it from Zululand. His plant flowered at Kew in April this year. As will be seen by the plate, this variety resembles the type in every particular except colour, which is a clear pale cream or lemon-yellow, tinged with orange at the base. The flowers lasted at least a month, and they were followed by fruits, which are now ripening in a warm house at Kew. The soft buff colour of the flowers cannot easily be represented on paper, but of the charm of the flowers there can be no doubt. If the introduction of such a slight variation of the type as *superba* is resulted in the breeding of such varieties as *Mario Reimers* and the newer *Admiration*, *Favourite*, *Optima*, &c., much more may be expected from crosses between the variety *citrina* and some of these. Apart, however, from its value as a breeder, the plant itself is a beautiful addition to greenhouse plants.

W. W.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

FIGS.—Where fruit is required in March, the stock of pot Fig trees should now be overhauled and the most promising brought under glass in readiness for a start in the course of a week or two. The earliest varieties, such as *St. John* and *Pingo de Mel*, will be the most reliable at this date, as these can be depended on to carry their fruits through to ripening if they are dealt with in a fair way. Certainly in point of quality or fitness for travelling they do not equal *Brown Turkey* and some others that are not so readily forced, but the demand for earliness must be met, and it is these varieties that meet it provided they are grown in pots. I should like to insist on the latter provision. A forecast of the probable unsatisfactory state of these varieties planted out was given by a writer in these columns last year, and since that time I have proved that both, and especially *St. John*, make altogether too strong growth when planted out, even though the border is quite a narrow one, and I should strongly advise those who may have intended to try them under similar conditions to give up the idea and stick to pot culture, leaving the planting out for later work and better varieties. Before the trees are got into position, the wood should be sponged over with one or other of the least harmful of insecticides, and this should not exceed the strength recommended by the vendors, for the Fig is easily injured with strong insecticides and the young wood near the tips of the shoots is especially tender, so that rather than use full strength I prefer to go over the same trees two or three times with a weaker solution. This is quite as effective and less dangerous; indeed, no one who has to deal with mealy bug should rest content with going over Fig or any other fruit trees once only during winter. Those trees which have not been repotted should have a nice top-dressing of loam, bone-meal, and a little wood ashes, to make room for which a little of the surface-soil, especially next the pots, may be removed without doing any injury to the roots. I do not advise as yet the building up of the usual banks of top-dressing material, but only a little to encourage the new roots which will commence to grow directly a little heat is given to the house. For the present and up to the time of starting, which will not be

for about a fortnight, the night temperature should go down to from 40° to 45° at night, and when the trees are actually put to work the night temperature should not exceed about 50°, ranging to 70° with sun-heat by day, until they are perceptibly on the move, after which they should be plunged in the bottom-heat material, only a very gentle fermentation being induced and the top temperature gradually raised. From the first it will be advisable to use the syringe once or twice a day, and on fine, bright days oftener than this, using tepid soft water always.

LATE HOUSES.—Roof or wall-trained trees grown for later work should be pruned, and after the house has been thoroughly cleaned down throughout the trees may be washed and re-tied. If bug is present, however, it will be better to only loosely sling the branches, so that they may come down again for another wash over whenever the opportunity arises. In pruning these trained trees I stick closely to the extension method of training, and cut a few of the main branches right back to the base when they have got beyond bounds to give room for others which have been led up to take their places. The Fig is particularly amenable to this treatment, as it does not appear to resent in the least degree the removal of quite large branches when the necessity arises, and in this way one is able to clothe the whole trellis with wood of fruiting size instead of being hampered with big limbs. There will also be some young wood to remove, *i.e.*, growths of the current year. In selecting these, position is one of the most important things to look out for, so that the trellis may be well clothed. But there is another item which must not be overlooked, and which is even more important still when we are considering fruitfulness, this being that the most fruitful wood is found in shoots of medium size and not in the stoutest pieces; therefore those removed should be first the very stout growths, and next those which are altogether too weak. The medium growths will be the best ripened, and it is these we must reserve.

POT STRAWBERRIES.—Just at present we are enjoying a spell of fine weather, which will do the Strawberry plants much good, especially if an opportunity is taken of turning the pots around. This will do good in two ways—first by exposing the shady side of the plants to the sunlight, and again by disturbing any roots that may be running into the ashes on which the plants are standing. In my case it has been almost impossible to apply the usual quantity of liquid manure water which I like to give them during the autumn, as the rainfall has been sufficiently heavy to keep the soil wet without aid from the water-pot, and as I do not believe in giving artificial manures at this time of the year, they have had to be content with what Nature has sent, and I must say they look none the worse for it. For the present there will be very little in the way of cultural detail to carry out, but the plants ought to be divested of any weakly side growths which they may have developed, leaving only the strong crowns. Runners, too, should be picked off as they form.

FORCING MATERIAL.—With the forcing season so near at hand, it will be advisable to get together a good heap of leaves and manure, and to give a good, lasting, but not violent heat, perhaps the best mixture is about three-quarters of good hard leaves, Oak or Beech, to a quarter of stable litter. This will be quite enough of the latter; in fact, where litter is scarce, the leaves alone will form a very nice hotbed. In these days of improved hot-water appliances, the younger generation of gardeners is apt to overlook the value of hotbeds in forcing houses, but with the loss of the hotbed there is also the loss of the genial growing atmosphere so grateful to those of an older school, whose training taught them to value at their fullest the benefits to be derived from the use of leaves and manure, and to spend both time and labour in bringing them to a proper state for use. It is not sufficient to gather

the materials and then to let them lie in a heap until required. To bring them into condition, the heap should be well mixed and turned at intervals varying from a week to a fortnight, according to the condition it is found to be in. At each turning a little fresh material should be added until sufficient for one's needs has been gathered. Soft leaves should not be used, and the gravelly sweepings from walks should also be rejected.

CORNUBIAN.

KITCHEN GARDEN.

A good deal of work comes under this heading at this season, as the time at command for completing it is but limited, wet, unsettled weather being likely to set in at any moment. The Pea season being practically at an end, all exhausted haulm, also stakes, must be removed from the ground, being tied in bundles according to their respective lengths and stored in some out-of-the-way corner. Unless made of such hard material as Ash or Hornbeam, the bottoms generally decay more or less the first season, and shortening becomes necessary before they are again usable. Those which have been used for supporting 4-foot Peas will again prove useful next spring after being duly shortened. They will then answer well for such dwarf early sorts as *Chelsea Gem* and *William Hurst*, also *Stratagem*, a Pea which should be grown in every garden. The same remarks apply to Bean stakes, and although these, being stouter, sometimes do a second season without any shortening, any that are reduced will prove useful the following summer for staking rows of runners which are pinched, instead of being allowed to run their normal height, or for the newer forms of climbing French Beans. Stems of Autumn Giant, Walcheren, or other sorts of autumn Broccoli which have been cut over should be pulled up and thrown away at once, as damp, foggy weather quickly induces decay and a most offensive smell. This is of paramount importance in gardens lying in close proximity to the mansion. It is not everywhere that well-decayed manure can be obtained in sufficient bulk for winter use, and the most has to be made of opportunities. Where strawy litter has to suffice, it must be properly prepared previous to finding its way on to the vegetable quarters. Turn it over at intervals of a fortnight, well soaking it with farmyard liquid as the work proceeds. This treatment will induce fermentation and decay. Such manure is valuable for working into stiff, retentive soils, decaying less rapidly and assisting to keep the staple open. I have frequently used spent Mushroom manure for crops of a non-exhausting nature, adding at the same time a percentage of artificial manure. Where nothing but ordinary manure has been used for years, a good change consists in a mixture of burnt prunings of fruit trees, old vegetable refuse, the clearings of potting sheds and compost yards, and a little lime. This makes a thorough change, and its value is seen in the vigorous crops it produces the first season. The present is a good time to rectify all faulty drains, renew gravel walks, and straighten edging tiles, which are liable to become displaced by pressure from the garden roller. It is not good policy to put off this kind of labour till frost and snow set in and a sticky condition of the paths prevails.

WINTER SPINACH.—I am afraid this important vegetable will not be over-plentiful this year, as rain in many districts was so late in coming. The greatest scarcity will be on shallow, hot soils. Those who are fortunate enough to possess a good healthy bed will find almost any amount of trouble well repaid. Give now a good sprinkling of soot between the rows, using the Dutch hoe afterwards; this will not only assist growth, but ward off slugs and grubs. For sowing seed in February, the ground cannot well be prepared too soon. Wireworm-infested soil should be treated to a liberal dressing of gas-lime, and a rich larder given. Moderation in picking must be observed, as if too closely pinched the plants get a check, and growth proceeds slowly during the winter.

WINTER TOMATOES.—The present time is rather a critical one with the main batch of Tomato plants intended for winter fruiting, although it is true the weather of late has been finer than could have been expected. The blooms must be examined daily at noon and advantage of solar heat taken to fertilise the flowers. Cultural mistakes at this period may prove fatal to success, and a very common one with the inexperienced is maintaining a too high, stuffy atmosphere, especially during hours of darkness. This produces a soft growth, from which the meagre crop of flowers falls, or if they set, malformed fruit is all that can be expected. All the same, a warm atmosphere must be kept up, or say from 55° to 60° on warm nights. Above all, guard against much damping down, as the surface of the soil in the pots will supply sufficient moisture. Admit air constantly when actual frost or cutting winds do not prevail, and let all floor-washing be carried out in the forenoon of sunny days. Beware of stimulants, as a comparatively small but wiry growth is essential if a good sprinkling of useful fruit is to be secured. On the other hand, a starved condition must be guarded against. To plants which are being brought forward for fruiting in say March or April careful treatment must be accorded when removal under glass takes place. A temperature of 55° maximum, a position near the roof-glass, which must be kept quite free from dirt in order to admit all the light possible, and careful watering will be the most essential things for the next two or three months. If needing it, do not scruple to pot now into 6-inch pots, as a root-bound state will end in yellow and impoverished foliage. J. C.

BOOKS.

THE STRAWBERRY MANUAL.*

MUCH has been published at different times on the subject of Strawberry culture, but the latest addition surpasses any monograph that has preceded it, and from the beginning to the end is replete with interest and instruction. It is thorough without being pedantic; gives advice that the authors know to be sound without being dogmatic; and further, contains much collated information that is of the greatest interest to Strawberry lovers generally in a most concise readable form. Commencing with the origin and history of the Strawberry, the wood, alpine, Hautbois, scarlet, Chili, Pine, and Indian Strawberries all receiving attention, we next come to a chapter on hybridisation. In this mention is made of all who have done good work in intercrossing species and improving varieties, including Mr. T. A. Knight and Mr. Michael Keens, to whom we are indebted for the good old Keens' Seedling, sent out in 1820, while in those days Mr. C. M. Hovey was doing good work in the United States. From 1840 to 1860 Mr. Myatt, of Deptford, more successful than other raisers, succeeded in producing British Queen, Eleanor, Admiral, and Filbert Pine, the first named still maintaining its reputation for high quality. About this time Mr. Barnes, of Bickton, was at work raising Strawberries, his most noteworthy introduction being Bickton Pine. Another raiser, Mr. Wilmot, of Isleworth, does not appear to have been very successful, but Mr. Trollope, of Bath, or, more properly, Bradford-on-Avon, Wilts, from one batch of seedlings (at least so an old friend of mine who was well acquainted with Mr. Trollope once informed me) selected Trollope's Victoria and Princess Alice Maud. Victoria, though popular for a time, is a worthless thing, but Alice Maud still retains its well-deserved popularity with some growers. From 1850 to 1860 good progress was made in the direction of raising new varieties. Mr. Powell, of the Royal Gardens, Frogmore, was responsible for several novelties, including Cockcomb, and Mr. Samuel Bradley, Elton Manor, Nottingham, gave us

Oscar, Dr. Hogg, and Sir Joseph Paxton, the last-named being still one of the best varieties in cultivation. Novelties were also raised by Mr. Cuthill, of Camberwell, and Mr. Kitley, of Bath, several continental raisers also doing good service, the most noteworthy novelty being La Grosse Sucrée, raised by De Jonghe, of Brussels. It was at this time that the late Mr. Thomas Laxton commenced his experiments, and these he continued "most assiduously for about thirty-five years." The results of this patient care combined with thoroughness and intelligence I need not particularise beyond mentioning that Laxton's Noble for a time took us by storm, while in Royal Sovereign we have an early variety that has simply superseded all other early Strawberries, or at any rate it is by far the most popular. The good work so well begun by Mr. Laxton has been ably continued by his sons, who have given us Monarch, Leader, Mentmore, Fillbasket, Trafalgar, and other distinct and more or less valuable new sorts.

Novelties have also been raised by Mr. J. Douglas, Dr. Roden, of Kidderminster, and Mr. Allan, of Gunton Park, who has been particularly happy in his efforts, having raised such sterling novelties as Gunton Park, Lord Suffield, and Empress of India. Mention ought also to be made of Mr. W. Carmichael, Messrs. J. Veitch and Sons, and the continental raisers, Herr Goeschke, Dr. Nicaise, F. Gloede, and De Jonghe, in this connection.

The chapter on seedling Strawberries is a summary of a paper read by the late Mr. Thomas Laxton at the Strawberry conference in 1890, and from this it appears he was convinced that American raisers were following the best lines, inasmuch as they aimed at raising varieties with a strong constitution and capable of doing better under trying conditions than are the less robust continental novelties, none of which have gained much favour on this side of the Channel. What Mr. Laxton aimed to raise was novelties remarkable for (1) constitution and moderate vigour, (2) fertility, (3) solidity and external firmness to adapt the fruit for transit, (4) flavour and quality, (5) size and appearance. Judging from Mr. Laxton's experience, the lot of the raiser of novelties in Strawberries is not a particularly happy one, and it would almost appear that luck rather than judgment in pollinating the flowers materially affects the results. This is what he says with regard to forthcoming results:—

As to forthcoming results, it may be anticipated that as the cultivated Strawberry is a cross-bred fruit (probably an admixture of the blood of all the edible species), there will be considerable variety as well as some wide breaks in the progeny from intercrossing, but generally the offspring will show characters intermediate between the parents, and with perseverance it will be possible to gain the end sought. Having practised Strawberry crossing so long, however, it is somewhat discouraging to know that Noble was obtained without artistic intervention. In 1884 I grew and sowed the seed from a large and handsome fruit of Forman's Excelsior (a fine and good-shaped, firm-fleshed Strawberry on light soils). From this sowing I obtained only five plants, one of which proved bolder than the rest, and subsequently became "Ennobled;" the remainder were not acquisitions. Now, considering that I have during the past thirty-two years from my own work of cross-breeding raised at least 10,000 seedling Strawberries, and out of these few have as yet been sent to the world, although all have had to be tried, and many, after being largely cultivated for years, have had ultimately to be abandoned, and that out of a small batch of five from natural fertilisation there should be one distinct gain. I feel that the work of a cross-breeder is not altogether satisfactory, nor, I may feelingly add, profitable.

A close perusal of the more matter-of-fact cultural details that are given confirmed my first impression, that there is in the book under notice very little to find fault with and much that old hands will consider correct. When dealing with soils the following paragraph ably sums up the whole question:—

The requisites for success in the cultivation of the Strawberry plant in gardens can be briefly enumerated,

and the details may then be readily dealt with. (1) To ensure the best results, deep and thorough cultivation is needful, for the plant roots deeply and freely. (2) Fertility must be maintained by judicious applications of manure, as though there are soils where Strawberries have been successfully grown for a time with very little or no manurial help, yet these are exceptions, and the good results are seldom sufficiently prolonged to warrant the omission. As a rule generous treatment in the matter of food supplies is well repaid in Strawberry culture. (3) Though free working is desirable, a loose soil must be avoided, and consolidation is therefore a requisite that must have attention. (4) A constant and liberal supply of moisture is essential, for the Strawberry is a thirsty plant; in consequence, all competitors in the shape of weeds must be vigorously suppressed and the preservation of soil moisture aided by frequent hoeing.

Manures receive a fair share of attention, while the hints upon increasing stock, forming plantations, planting, routine management, protection, gathering and keeping the fruit are equally to the point and reliable. The chapter for market growers is particularly interesting, and contains a few startling facts as to the extent to which the Strawberry growing industry has reached. It is stated that around the metropolis Strawberry growing has for many years formed an important part of the market garden industry, and that within a short radius of London there is a greater area of land under Strawberries than in any other district in the world. Kent has become the great Strawberry-producing county, and though it was claimed in 1880 that the largest farm in the world devoted to these fruits was at Norfolk, in Virginia, United States, where 250 acres were under Strawberries in bearing, in Kent this has been far surpassed. A year or two since, one firm at Orpington and at St. Mary Cray had 650 acres under these fruits, while at the present time near Swanley about 2000 acres are devoted to fruit, a large proportion being planted with Strawberries belonging to one firm. As many as 75 tons of Strawberries have been sent from Swanley Junction alone in one day. Market growers' methods are plainly and correctly described, and the hints upon forcing Strawberries, though brief, are equally commendable. In the replies to a few questions submitted to numerous Strawberry growers, it transpired that Royal Sovereign is by far the most popular variety for forcing, gaining fifty-seven votes; whereas the next to it in point of popularity—Vicomtesse H. de Thury—was favoured by twenty-eight growers only. Diseases and insect pests are duly commented on, and remedies given. A reference is made to the experiments with Strawberries being carried out at the Woburn Experimental Fruit Farm, and a brief description given of the principal varieties of Strawberries in cultivation. W. I.

THE TEACHING BOTANIST.*

THIS is a handy and well-printed guide in the main devoted to structural botany. The author believes that structure lies at the root of all good and practical teaching at the present time, and that it should be used as the basis of a course on which to build up as best one may the physiology and ecology of plants—this latter phrase meaning, I presume, the economical growth, or adaptability of plants generally to external conditions. We are told, for example (p. 37), that "practically, physiological experiments most profitably come along with the particular structures which they best explain. Thus experiment upon absorption of liquids should accompany study of the structure of the root, photosynthesis (leaf work in sunlight=assimilation) that of the leaf, respiration by the action of growing seeds," &c. The notion is that if physiology is studied before structure, the student would be plunged at once into a sea of unfamiliar phenomena, and his atten-

* "The Teaching Botanist": A manual of information upon botanical instruction, together with outlines and suggestions for a comprehensive elementary course. By William F. Ganong, Ph.D. New York: The Macmillan Co. 8vo, pp. 270, with illustrations and index. 1899. 5s.

* "The Strawberry Manual." By Laxton Brothers, Bedford. Hulatt and Richardson, Bedford.

tion distracted by the use of many unfamiliar instruments and methods.

The contents table of the book is wide and comprehensive, there being chapters on: The place of the sciences in education and of botany among the sciences—What botany is of most worth—On things essential to good botanical teaching—On scientific recording, drawing, and description—On laboratories and their equipment—On botanical collections and other illustrations—On botanical books and their use—On some common errors prejudicial to good botanical teaching. Then comes in part 2 an outline for a synthetic elementary course in the science of botany, followed by division 1, which treats of the anatomy and growth of seeds, roots, stems, shoots, leaves, flowers, and fruits deduced from familiar examples; while division 2 of this section treats on the natural history of the groups, such as the Algae, Fungi, Lichens, Bryophytes, Pteridophytes, the Gymnosperms, and the Angiosperms, &c., followed by a fairly good index. The author at p. 151 emphasises the fact that plants alone possess the power of absorbing carbonic dioxide, minerals and water from the air and the soil in which they grow, and from which by the aid of sunlight they form starch or a related substance, which is really the food of the plant. New living tissues and plant products are thus formed and nourished, and, owing to the facility with which plants can turn their starch to sugar and the sugar back again into starch, we have that wonderful transference of energy and material from one part of a plant to another, results which are seen in all our garden and field crops.

But little is said of the dynamics of plant growth, that silent and wonderful power which enables a tender fungus to uplift the heaviest flag-stones, and tree-roots, to throw down walls and other heavy structures by sheer upward or lateral growth pressure. But the great central miracle of plant life is that power of green leaves and sunlight to turn dead materials into living tissues filled with energy and vital power, a silent and mysterious resurrection continually going on before our eyes. Any chemist or maltster can turn starch into sugar and diastase, but no chemist has yet been able to turn sugar back again into starch, as the plant does in a silent and apparently automatic way. There is one term in particular used a good many times in this book, viz., "ecology," its meaning being the relation of structure to use, and we find at p. 208 the combination "physiologic-ecologic," by which the relations of function and structure to use are presumably intended. The author is careful to point out that from cut specimens in the classroom the student can do little more than guess at their ecology, for, removed from their native homes and surroundings, portions of a plant can give little or no idea of its habits. In the author's list of books there is no mention of "A Manual and Dictionary of Flowering Plants and Ferns," by J. C. Willis, M.A., now director of the Botanic Garden in Ceylon (2 vols., Cambridge Press, 1897), one of the most handy and useful aids to the teaching botanist published during recent years. It is mentioned here in connection with Dr. Ganong's, "The Teaching Botanist," because I know of no other one work that gives such a distinct and clear bird's eye view of technical botany and plants generally in such a concise and handy form.

Scattered through the pages of this book will be found a good many practical hints and suggestions, and it is a work that will be especially valuable to teachers who are commencing their career, and more especially to students of an advanced type who intend to take up the teaching of botanical science as a profession. The book will also be of interest to many as showing the methods and apparatus devised and adopted in the United States as contrasted with those more familiar in this country. If a second edition should be called for it might be an advantage to add a glossary of the terms used in the work.

F. W. B.

TREES AND SHRUBS.

THE BUSH HONEYSUCKLES.

THE bush Honeysuckles include a large number of shrubs that are beautiful in habit and showy in flower and fruit. The light greyish stems and close branching habit of some species and varieties give a very pleasing effect in winter when they are planted in large masses. The nomenclature of the *Loniceras*, like that of the *Spiraeas* and *Philadelphuses*, is in a somewhat confused condition. It is no uncommon thing for the same plant to be sent from different nurseries in the United States and Europe under several different names. Some beautiful forms, of free growing habit and said to have originated in Russia, have recently appeared. The earliest of the bush Honeysuckles to come into bloom are

Lonicera Standishi and *L. fragrantissima*.—*L. Standishi* is deciduous and *L. fragrantissima* is almost evergreen. The flowers appear before the leaves and are fragrant. They usually come into bloom here about the middle of April and after mild winters very much earlier. *L. fragrantissima* is by far the handsomer of the two. In severe winters here both suffer considerably. They are thought by some botanists to be forms of one species. However that may be, they certainly are very distinct in appearance.

L. ciliata is a small, native, early-flowering shrub, abundant in North-eastern American woods. It is useful for undergrowth.

L. oblongifolia is another early-flowering, small, native shrub, having about the same distribution and the same merits as *L. ciliata*.

L. cœrulea is a rather pretty compact shrub of considerable value. The small flowers are followed by pretty inconspicuous blue fruit in late summer. This shrub has a wide native distribution, occurring in the northern parts of the American, European and Asiatic continents.

L. cœrulea var. *graciliflora* is a much more robust and stronger growing plant than the type. It is sometimes found under the name of *L. Kirilowi*. It is probably of nursery origin.

L. tatarica in its numerous forms is the best known and the most familiar of all the shrubby *Loniceras* in cultivation. Its freedom of growth, early leafing habit, abundant blossoms, showy fruit and absolute hardiness account for its popularity. It has, however, one serious fault—a somewhat general tendency to lose its leaves between late summer and autumn. Some of the Tartarian varieties have remarkably beautiful flowers, notably *speciosa*, *virginialis grandiflora* and *splendens*, and they far surpass the type in general excellence.

L. Ruprechtiana is a very distinct species from Manchuria. It has large pale green leaves, a little downy on the under side, and numerous straw-coloured, rosy tinted flowers, followed by bright scarlet, transparent fruit. There are several varieties of this species that differ slightly in the colour of the flowers. The type and all its forms are perfectly hardy here.

L. Morrowi is a Japanese species somewhat like *L. Ruprechtiana*, but the leaves are smaller and lighter in colour. It makes in time a very symmetrical bush, and bears abundant, showy, red fruit in July, and is very hardy.

L. Xylosteum, commonly known as the English Fly Honeysuckle, is not so tall growing as some of the former species and its flowers are much less conspicuous, but it bears very handsome dark scarlet fruit of considerable size. Of this species there are several distinct varieties with white and yellow berries, and all are hardy. It is probably the oldest of all the *Loniceras* in cultivation.

L. orientalis is an inconspicuous flowering shrub, native throughout the temperate Himalayas. It has a compact manner of growth, and is distinct from most other species in bearing large black fruit.

L. Maximowiczii comes from Eastern Manchuria. It has oblong-shaped leaves and makes a neat compact bush about 4 feet high. The flowers are rosy tinted and inconspicuous, followed by irregularly round red berries, ripe in August. It seems to be hardy.

L. Alberti is a native of the mountains of Eastern Turkestan. It requires rich, moist soil to see it at its best. The habit is low and pendulous, and the branches are clothed with smooth, light green foliage. The flowers are rosy lilac and showy about June 1.

L. quinquelocularis, said to be a native of Northern India, is a tall, rapid-growing bush, with yellowish flowers about June 10. There is no particular beauty in the flowers or fruit. It is not quite hardy here, being occasionally killed back in severe winters. This species is sometimes found under the name of *L. translucens*.

L. gracilipes is a shrub of good habit, and does not appear to grow over 4 feet high. It has rosy tinted flowers early in the season, followed by oblong-shaped red fruit. Of the native country or origin of this form I have no knowledge.

L. bella in its different forms is a remarkably handsome type of bush Honeysuckle. The form under the name of *L. bella albidia* is the best of all. I know of no bush Honeysuckle that displays such a wealth of flowers as *L. b. albidia* when it is in good condition. Other conditions being equal, it retains its leaves until quite late in autumn. When the branches are loaded with the showy Red Currant-like fruit in the month of July it is really magnificent. The different forms of *L. bella* are said to be the result of crossing *L. Morrowi* with some of the Tartarian varieties, and to have originated in Russia.

L. notha is another handsome form of hybrid origin. The habits of the different kinds are good, flowers showy, and the fruit conspicuous. The parentage of *L. Ruprechtiana* can easily be observed in these forms, and perhaps that was crossed with some of the best Tartarian varieties.

L. minutiflora is another handsome spreading bush of hybrid origin, said to be the result of a cross between *L. micrantha* and *L. Morrowi*. It gives a handsome display of yellowish red fruit.

L. salicifolia has Willow-like foliage. It is also of hybrid origin, said to be the result of crossing *L. micrantha* with *L. Ruprechtiana*.

L. iberica is a very pretty compact shrub, and about the latest of all the erect species to bloom. It has red berries in September. It is a native of the Trans-Caucasian region, and has been in cultivation for a great many years, but it is seldom seen. It is perfectly hardy.

L. Lsdeboursi from the Western United States has yellowish red flowers, and is not uncommon in cultivation.

Bush Honeysuckles should be carefully pruned in winter or when they are dormant, and the old and weak wood thinned out, leaving all the best healthy young wood full length, unless some of the branches have gone too far for the general symmetry of the bushes. Never under any circumstances trim or shear them back. Pruning after they have done blooming is recommended by some, but that should never be attempted by inexperienced persons, as indiscriminate summer pruning has a weakening effect on all shrubs. Unless one has a thorough practical knowledge of cause and effect in the general principles of pruning, I would advise him to leave summer pruning alone. The best six bush *Loniceras* are *Lonicera bella albidia*, *L. Morrowi*, *L. Ruprechtiana*, *L. fragrantissima*, *L. Alberti*, and *L. tatarica* var. *speciosa*.—JOHN DUNBAR, Rochester, N. Y., in *American Gardening*.

Cytisus nigricans.—During July this is one of the most charming of the family. It carries its flowers on tall, slender, perfectly erect spikes terminating the present summer's growth. The

blossoms commence to open at the bottom first, and a long succession of them extends over many weeks. They are bright yellow, the name of nigricans referring to the peculiarity of the plant turning black when dried. As soon as it has done flowering the upper part of the shoot bearing the seed-vessels should be removed, these being so abundant as to weaken the plant if the whole of them are left to ripen. They may be shortened still more in spring before growth recommences.

THE MAPLES.

THESE, mostly of northern regions, are often of the highest value in pleasure-ground planting, some of the species breaking into a great number of varieties. The best kinds are the Silver Maple (*A. eriocarpum*), naturally a very beautiful tree, though we get from it variegated and other forms which are not of much value, except the cut-leaved one, which is good. The Norway Maple (*A. platanoides*), also a beautiful tree, has many varieties, the purple ones being very effective. The common Sycamore Maple (*A. Pseudo-platanus*) has also a number of varieties, though none of them better than the natural tree, which is very fine when old. The variegated forms are usually tree rubbish. The Virginian or Red Maple (*A. rubrum*) is a beautiful tree, as is also the Sugar Maple (*A. saccharinum*). The Colchic Maple (*A. letum*) is an elegant tree. The Japanese Maples are interesting and beautiful, but not quite hardy and robust, except in the most favoured districts. Moreover, the fine varieties are often grafted, which makes them still less able to endure severe weather. *A. Negundo* is the kind which has given us the much overplanted variegated Maple so common in gardens. *A. Ginnala* is worth mentioning as a low tree—almost a shrub—whose leaves die off a rich red in colour. The North American and European species are hardy as forest trees and thrive in almost any soil, but the Southern American kinds and Japanese Maples want warmer soils and positions to thrive in our climate. The variegated varieties in this family are too many, and our nurserymen insist upon send-

The known and cultivated species are the following: *Acer campestre*, Europe; *caudatum*,

spreading leaves quite a Palm-like appearance. One of the most ornamental shrubs of September



Acer palmatum.



Acer heterophyllum.

N. India; *circinatum*, California; *cissifolium*, Japan; *carpinifolium*, Japan; *cratogeomorum*, Japan; *creticum*, Asia Minor; *diabolicum*, Japan; *distylum*, Japan; *eriocarpum*, N. America; *glabrum*, N. America; *grandidentatum*, N. America; *Helldreichii*, E. Europe; *heterophyllum*, E. Europe; *hyrcanum*, Caucasus; *insigne*, Persia; *japonicum*, Japan; *Lobeli*, S. Italy; *macrophyllum*, California; *micranthum*, Japan; *monspessulanum*, S. Europe; *Negundo*, N. America; *nikoense*, Japan; *opulifolium*, Europe; *palmatum*, Japan; *pectinatum*, N. India; *pennsylvanicum*, N. America; *pictum*, Japan; *platanoides*, N. Europe; *Pseudo-platanus*, Europe, Asia; *rubrum*, N. America; *rufinerve*, Japan; *saccharinum*, N. America; *Sieboldianum*, Japan; *sikkimensis*, N. India; *spicatum*, N. America; *tataricum*, E. Europe; *Volcremi*, Caucasus.

FLOWERING SHRUBS IN SOUTH DEVON.

ABUTILON VEXILLARIUM has continued to produce its crimson and yellow blossoms on its arching shoots throughout the month, and Aralia (Fatsia) japonica is still bearing its Ivy-like inflorescence, while the spreading, deeply pinnate leaves of Aralia spinosa are crowned with ivory-white flower-plumes. This Aralia has a particularly decorative effect where it is kept to a single straight stem, all side

has been Caryopteris mastacanthus, specimens 4 feet or 5 feet in height and as much in diameter studded with a profusion of pale blue flower-heads presenting a most attractive appearance. At a little distance this subject is not unlike Ceanothus Gloire de Versailles, a shrub which was still in bloom during the early days of the month. In a neighbouring garden Cassia corymbosa is bearing its clusters of golden blossoms, and the Mexican Orange Flower (Choisya ternata) is in many cases carrying an autumnal crop of scented blossoms. Clerodendron trichotomum has borne its odorous white flower-clusters and C. Bungei its rose-coloured corymbs, while here and there plants of Cytisus racemosus may be seen golden with an autumnal display of bloom. Crataegus Pyracantha is brilliant with its thickly-set bunches of scarlet berries, Escallonia macrantha is in some gardens bearing a sparse second crop of rosy pink blossoms, and at the commencement of the month E. montevidensis was displaying its white perfumed flower-heads. The Habrothamnus is bearing its drooping clusters of tubular crimson blooms, and the varieties of Hibiscus syriacus have been in flower. Large bushes of the snow-white form, H. s. totus albus, which is decidedly the most attractive of all, when covered with blossom present a most decorative appearance. Leycesteria formosa, without being a strikingly handsome shrub, has a certain value owing to its unique character. Its long, pendent whorls of purple bracts, termi-



Acer circinatum.

ing out many forms which, however attractive they may appear to them in the hand, planted out soon give a poor and harmful effect.

growths being removed to a height of 12 feet or so, as when grown in this manner it produces with its tall, slender shaft and wide-

nated here and there by solitary white blossoms, now hang from its cane-like shoots, rendering the plant a distinct feature in the shrubbery. The Venetian Sumach, or Smoke Bush (*Rhus Cotinus*), has formed a charming picture with its clouds of purple red feathery clusters, and the Sea Buckthorn with its grey-green foliage, lighted up by countless berries of bright orange hue, has been a conspicuous object. Huge bushes of Tamarisk are now in the zenith of their beauty, their long, slender shoots of feathery foliage that flutter beneath the slightest breeze being now terminated by plume-like sprays of inflorescence, whose tints range from ruddy pink in the unexpanded blossoms to flesh-white in the fully opened flowerets. Many varieties of the shrubby Veronicas are in bloom, and Yuccas of different species hold aloft their splendid spires of ivory white blossoms. During the month I saw two noble specimens of the variegated form of *Y. gloriosa* in fine flower. The variegation of the plants in question was particularly distinct, being quite as marked as in the case of the variegated form of the New Zealand Flax (*Phormium tenax*). This, however, is far from being the general experience, since plants sold as variegated forms of this Yucca often exhibit but little departure from the normal colouring in their leaves. The Pampas Grass (*Cyperium argenteum*) is now commencing its autumnal display, and taking the place of the earlier-flowering New Zealand Reed (*Arundo conspicua*). The Eulalias are also throwing up their flower-shafts, large clumps presenting a most ornamental appearance. A week ago I saw on the grass in a beautiful garden an enormous clump of *Eulalia zebrina* 18 yards in circumference. The large standard *Magnolia grandiflora* has continued to produce its ivory white, perfumed chalice in abundance, and bids fair to surpass itself in the number of blooms borne in the year. S. W. F.

ORCHARD AND FRUIT GARDEN.

IS POTASH A CURE FOR CANKER?

THERE are, I am afraid, few fruit growers who are unacquainted with canker. The Apple, perhaps, is most often attacked. Apple trees are also much more prone to fall victims to it on some kinds of soil than on others, and to such an extent is this the case that it is often a difficult matter to find an Apple tree free from it in some collections. These are, of course, extreme cases; nevertheless, they exist, and the owners both of these and where less serious cases occur would no doubt be only too glad to hear of an antidote for the disease. Some kinds of Apples, too, are given to canker much more than others, of which the Ribston Pippin may be cited as an example. There are several other sorts that become nearly, if not quite, as badly affected in some places, and Blenheim Orange when grown as a restricted bush also comes under the same category. The continual pinching and pruning necessary to keep these bushes within bounds seem to aggravate the evil. It is through having to deal with some bush trees of Blenheim Orange that had got into a bad state from canker that I am induced to pen this note and to record the steps I took to combat the disease, and give the results of the treatment up to the present time. The trees in question are about eighteen years old, and have been an eyesore to me for a long time, but I did not care to destroy them. The ground beneath these and neighbouring trees being required for vegetable growing, it is obvious they had to be kept much restricted. Having made other arrangements two seasons ago, I was enabled to allow all these trees to make more free growth, and then I was determined to see what could be done to alter the condition of these canker-stricken trees. The great thing

was to overcome the canker if possible by inducing the trees to make free, healthy growth and so to grow out of it. Some of the branches had become eaten nearly half way through with the disease, which had spread to most parts of the trees, even the young wood being affected by it. To stop this was the first thing to be done, and for this purpose potash was given, and as a further help the trees were given their heads and allowed to grow away at will in the summer months. Another remedy was to wash the trees and all the wounds and scars on the branches with caustic alkali solution, which killed all insects and fungoid germs there might have been hibernating or resting there. The potash was applied liberally to the surface in the winter months soon after the ground had been lightly pointed over. So well did it answer, that I could not but help noticing the improved condition of trees as the season advanced, and how nicely the cankered portions of the branches began to heal over. This season the potash was again used, but in conjunction with other ingredients, and the result is a still further improvement. The additions to the potash were superphosphate of lime and best quality bone-meal. This was mixed as follows: To 1 lb. each of muriate of potash and superphosphate of lime were added 3 lbs. of bone-meal, which was afterwards well incorporated together. This was strewn on the surface of the ground to as far as the trees extend at the rate of 2 ozs. to each square yard and afterwards raked in. This was applied just as the trees started to grow and again at the latter end of August. The trees bloomed well, and for the first time since they were planted are bearing a good crop of fruit, which is large in size and likely to be highly coloured by the time it is ready for gathering. The side shoots or spur growths were shortened back in the summer, but the leading shoots at the extremity of each branch were left intact, and will be merely topped at the winter pruning. I am very much pleased with the results, and shall certainly follow up the treatment another season, by which time I hope the trees will be quite restored to health, nothing but cicatrices on the branches being seen in place of the cankered wounds. I am a firm believer in the value of muriate of potash for fruit trees, and its use has led to some excellent results here this season with Peaches, Nectarines, Pears and other fruits. The result of its use is a clean growth and great depth of colour in the fruit. This same form of potash, when mixed with the other ingredients already mentioned, forms a fine manure for fruit trees of all descriptions, also for Vines. When combined, these constituents, in addition to promoting healthy growth and imparting colour to the fruit, also induce great fruitfulness. A. W.

Puzzled amateur fruit growers.—I have had lately one of the most instructive experiences in respect to the merits of extension v. restriction that I have ever come across, showing how hopelessly handicapped the inexperienced amateur is who trusts to the directions of others. Two friends of mine, one an engineer and the other a builder, had large well-planted gardens adjoining. Both wanted Plums and planted Victoria, one against a low wall and the other in the open as standards. Both pruned vigorously and closely, hacking in the long wand-like shoots produced every season in consequence of the cutting back, and both had no crops and—wondered! At last the engineer got tired of his barren trees, which by this time had reached the top of the wall, and left them in disgust to grow as they pleased. The result in two or three years was a big head of branches above the wall, and soon

after a heavy crop of Plums. I took to this garden while the present year's crop was still unripe, and I think I never saw such a crop of Victoria. Then my neighbour the builder told me "the strangest thing he ever knew," viz., that although he and his neighbour planted their trees at the same time there was still no fruit on his trees, and he had continued to prune "as regularly as ever." I guessed the cause, and found his trees (standards) with stumps of heads bearing a crop of shoots of this year's growth like Willows and nearly as long—not a fruit-bud on them. Of course, no gardener, even though a pruner, would have cut the trees in so hard, but my friend is not a gardener, and followed the gardener's counsel rather closely. He has not been at the tree yet with his knife this season, and after having the mystery of buds and fruit-buds, &c., explained to him, he has promised not to go near the trees with a knife in hand for the next two years. It is pitiable to see what losses cottagers and amateurs sustain in their gardens from ignorance of simple gardening operations. The French small cultivator is far ahead of us. —S.

AUSTRALIAN STOCKS FOR APPLES.

SEEING an article in THE GARDEN of April 15 on "Australian Stocks for Apples," with a request from the editor for further information, I will give you the result of my own observation. Winter Majetin was the first Apple used in the colonies as a stock capable of resisting the woolly aphid, and it is practically blight-proof. Although cuttings of the root 6 inches long and from the thickness of a darning-needle to, say, 1½ inches in diameter, planted with the tops of the cuttings level with the surface of the soil, will grow, yet cuttings of the Northern Spy roots from 2 inches to 4 inches long, grafted into Spy cuttings of from 4 inches to 6 inches long, and planted with one bud above ground, will give strong, straight stocks the first year; whereas, the stock from the root-cuttings will be irregular in strength and rather crooked for a year or two. Where no Northern Spy roots for grafting are available, cuttings of Spy as mentioned above may have an upward cut from within three-quarters of an inch of the base of the cutting and have a small piece of any Apple root 2 inches or 3 inches long and as thick as a crow-quill, cut wedge-shaped, and inserted and tied in. The root will keep the cutting alive until the cutting pushes out a mass of fibres from the base. At the end of the first year the cuttings would have to be taken up and the common Apple roots carefully removed, or they might take the lead. The roots on the cuttings at the end of the first summer would be large enough for starting next year's batch of stocks. If a root is inserted more than three-quarters of an inch from the base of the cutting, the base of the cutting will probably rot, and instead of having a Spy stock you will have a Spy grafted underground on a Crab, and therefore a supply of food and a retreat for the Apple blight underground.

Trees grafted on Spy or any other Apple that is free from blight will not be free above the graft because of the stock they are grafted on, but they will have no blight on the roots or on the stems below the grafts. Spy and Majetin will not come true enough from seed to be of value as blight-proof stocks for other Apples. I also saw some remarks on propagating *Cydonia japonica*. Where an old plant can be dug up, its roots, if cut into 4 inch lengths and planted with the tops of the cuttings 1 inch or 2 inches under the soil, strike very freely and make the best of plants with the least trouble, even yearling plants giving roots that would grow. A. ALLISON.

Letham, Wanganui, New Zealand.

Apple Cox's Orange Pippin.—I have seen many excellent crops of this delicious Apple this season, but the best was in an enclosed garden on the Chilworth Manor estate, near Southampton, the soil being a thin stone brash, in which

for many years vegetables had been grown before the trees were planted. The garden is exposed to south-west winds, but is well sheltered on the north and east by Fir woods. Here were trees, large ones, carrying from three to four bushels, and smaller ones a bushel each, but all grandly cropped and the sample very fine and richly coloured. The trees had in several cases to be propped up to support the load. The smaller ones had been well mulched and occasionally saturated with water. On such a soil this Apple always bears; indeed, poor as the soil looks, it seems to suit Cox's Orange.—A. D.

Wasps and fruit.—The attacks of these insects have been short and sharp this year, and there are now signs that they are beginning to disappear for the season. The earliest nests taken this year were a fortnight later than those of last year, and I have not taken as many by half. I can find nothing better than cyanide of potassium for the purpose, and always keep a stock of it ready mixed in well-corked bottles. When a nest is found it is left until a warm sunny day when the wasps are busy, and a couple of tablespoonfuls of the cyanide well diluted poured in. All the insects are killed as they return to the nest, and this is dug out next day. When the nests are in trees or in places where it would be difficult to pour in the cyanide, an old sponge or a piece of Moss is well soaked with it and placed in the entrance to the nest. Where wasps attack ripe fruit in vineries or on the walls, a little wasp destroyer placed in some damaged fruit will drive them away. But the effect of this is not always lasting, and it has to be repeated, or the insects return in strong force again. The large flies that are always to be found about fruit when once the wasps have started on it are equally mischievous, and the wasp destroyer has the same effect upon them.—SUFFOLK.

Grape Buckland Sweetwater.—It is not often that one sees really good examples of this Grape now-a-days, and yet it has many points in its favour. When properly finished in the early summer it assumes a rich amber tint, and in point of quality it is superior to Foster's Seedling, though the Vine is not such a prolific and certain bearer. I have grown Buckland Sweetwater in a first early house along with the Black Hamburgh and Foster's Seedling, and though not so reliable as either of these it never failed, and when ripe the fine large berries were highly appreciated in the dining-room. It is not to be discarded as an exhibition Grape when staged at summer shows in conjunction with Black Hamburgh, and only this summer I saw a couple of bunches staged, which proved it to be anything but an inferior Grape for the show board.—H. H.

Plum Webster's Gage.—I think I am right in saying that it is but seldom this delicious Gage is referred to in the horticultural press, though why I cannot conceive, unless it is that the tree is tender, or else that it is a shy bearer elsewhere. If such is the case it is to be deplored, as it is nearly, if not equal in all respects to the old, but highly esteemed Green Gage. With me the tree, if not a heavy cropper, is a consistent one, as it is seldom that it misses bearing altogether. I grow it as a cordon, and if anything it is rather inclined to make too strong growth, which necessitates an occasional root-lifting. Under these conditions it succeeds very well, and always sets plenty of fruit-buds. As regards the fruits, they are somewhat larger than Green Gage, rather more oval in shape, and of a yellowish green colour. When fully ripe the flesh

is yellowish, tender, soft, juicy, and richly flavoured.—A. W.

Strawberries at Gunnersbury.—Most of THE GARDEN readers are aware that the alpine varieties receive much attention at Gunnersbury House. I must confess I did not care for the

THE JARGONELLE PEAR IN HERE-FORDSHIRE.

THE above Pear, one of the oldest varieties in cultivation, is well known in every district throughout this country. It finds great favour



A Jargonelle Pear tree in bloom. From a photograph sent by Mr. J. T. Newman, Berkhamsted.

alpenes until I saw Mr. Hudson's plants. Those having a prejudice against them, as I had, should pay Mr. Hudson a visit to be convinced of their value. Of course, it is only by a determined effort that such results can be obtained, and there is the possibility of disappointment arising from the first or, it may be, the second season's trial, because both plants and method of dealing with them need be well understood before a satisfactory return is had. St. Joseph is the variety that does such signal service. A batch of 650 plants is grown for the later summer and autumn months. They are layered during July into 4½-inch pots, which is the size found best for fruiting them in. At the time of my visit there was a good sprinkling of fruit ready to be gathered. As showing their perpetual habit in bearing, it may be mentioned that in many cases flower-spikes were rising, some plants that carried ripe berries having open flowers. Two houses furnished with step-stages were filled with these plants, so arranged that every pot could be conveniently watered and the fruit gathered when ready. None but these alpine and hybrid Strawberries could be fruited from runners layered during the current summer, and though few could devote so much space to them as does Mr. Hudson, many, I am sure, would attempt a few could they but see how useful they are late in the season.—W. S.

in this county as an early variety and is somewhat extensively grown. Very large trees are to be met with covering the gable ends of farm buildings and oftentimes the principal front of the farmhouse is also given up entirely to the cultivation

of this Pear. Not far from where these lines are being written there exists a very fine example, which has been trained so that the entire south front of what is a large old-fashioned farmhouse is covered from within a few feet of the ground to the eaves with its branches. Judging by the size of the bole, this tree must be of great age, yet it is perfectly healthy and vigorous and bears good crops of large-sized fruit. Its roots no doubt extend into the kitchen garden, situated some 30 feet or 40 feet from where the tree is planted, and as the ground generally receives plentiful supplies of farmyard manure annually, the vigorous and healthy condition of the tree is thus accounted for. The above is really the best method of growing the Jargonelle Pear, as, on account of its being such a vigorous grower, it must have plenty of room to extend. To try and restrict it either by root-pruning or constant pinching back of the growths is to court failure, or if it does not result in failure the returns are at the best but poor. Allow the branches to extend so that a large area of space is covered with them, and the tree then gets rid of its superfluous energies, so to speak, bears heavy crops of fruit, and continues to do so for many years if proper attention be paid the tree. For this reason I should never advise the cultivation of Jargonelle where it would be cabined and cramped for room. If ample training space can be afforded it, then by all means plant it for the earliest supply. These large old trees invariably set an abundance of fine bold fruit-buds, and the floral display which follows in the spring is well worth anyone's while making a special journey to behold.

The accompanying illustration, which shows an untrained tree growing in a back yard, conveys a very good idea of the beautiful effect produced by the Jargonelle when in full bloom. That it is a hardy prolific variety we have abundant proof; otherwise it would not submit to the rough-and-ready treatment often accorded it when grown on farm buildings. When given anything like adequate attention, magnificent fruits can be produced in this county which for size and quality would compare favourably with those produced in the most favoured districts. The drawback with regard to the cultivation of this Pear is, of course, the fact that the fruits keep but such a short time; but there is never any difficulty in getting rid of the surplus, provided they are sold before they are too ripe. Of course, the market grower is on the alert and bears this fact in mind, but there is a tendency among amateurs to let the fruits become too ripe before disposing of them; consequently, they will hardly bear handling, and bruise badly. When marketed in good order remunerative prices are to be obtained, particularly if the small and rough-looking examples are kept back. The Jargonelle also succeeds as a standard, but the individual fruits are not so large as those produced by wall trees. As a bush I must—as far as my experience goes—pronounce it a failure, as it grows far too rampantly on the Pear stock to be cultivated in the kitchen garden. On the Quince it cannot be induced to make sufficient growth to form anything like a respectable-looking tree. Otherwise it bears well, the fruits are of good size and highly flavoured. The most successful way of growing Jargonelle, therefore, is to accord it a position on a wall where it can extend both in an upward and lateral direction, as from such trees the finest produce is invariably gathered. A. W.

Strawberry Latest of All.—"A. D." calls this one of the most valuable late varieties in cul-

tivation, which reveals his knowledge of Strawberries, because it is really only a second early and inferior to others at that. It comes in several days after British Queen, according to the raiser's own description—a very fine distinction indeed—and British Queen succeeds Keens' Seedling, a well-known early kind, both kinds being used for early forcing. Whoever heard of any gardener forcing a naturally late sort like the Elton Pine, which "A. D." avers is now seldom grown; whereas, in *THE GARDEN* of September 23, in the paper on "Fruit Farming in Scotland," the Elton Pine is said to be one of the only two sorts grown, and that six or seven of its fruits, selected at random, have been known to weigh one pound. "A. D." says Latest of All has not a British Queen flavour. Has he forgotten that it is claimed to be quite equal to the British Queen in flavour, and had a first-class certificate as a seedling from British Queen? Helena Gloede, said to be one of Latest of All's parents, the raiser of Latest of All thinks so much of that he has expunged it from his catalogue of Strawberries. My own belief is that Latest of All has not a drop of Helena Gloede blood in it, and that it is neither more nor less than an inferior variety of British Queen, and now admitted by "A. D." to be without the chief quality claimed for it, viz., a British Queen flavour. One of your correspondents, agreeing with my description a few weeks back of Elton Pine, says he has had it fine in September in the south. I challenge "A. D." to produce a dish of Latest of All within a month of that date.—J. S.

CHRYSANTHEMUMS.

HOW TO USE LARGE EXHIBITION BLOOMS.

THE columns of *THE GARDEN* have for years deprecated the way in which blossoms of high quality have been exhibited, the monotonous lines of boards of blooms leaving much to be desired. Ordinary visitors—persons who are not growers, whom it is hoped to interest in the Chrysanthemum by a visit to an important show—are usually highly pleased with the first few exhibits they inspect, but when these are repeated time after time and the same method of arrangement on boards always followed, the inspection becomes monotonous. Keen observers have come to the conclusion that, except in a few cases, interest appears to be on the decline—at least, so far as the ordinary visitor is concerned. Is it not fairly safe to say that this may be largely attributed to want of enterprise, lack of novelty, and, above all, the want of practical illustrations of the uses of the Chrysanthemum for all forms of decoration? It is the large-flowered types of the Chrysanthemum which have for years remained in the background from a decorative point of view. We may therefore gladly welcome the innovation of the National Chrysanthemum Society at their exhibition on November 7, 8, and 9 next.

The chief class on this occasion will be for twelve vases of specimen blooms of Japanese Chrysanthemums, distinct, each vase to contain five blossoms of one variety. The vases will be each 18 inches high, and not less than 6 inches of the stem of each flower must be shown above the rim of the vase. Chrysanthemum foliage must be added, but upon separate stems. This latter condition is a wise provision, for if the large blooms be exhibited with their own foliage adhering they very soon collapse; whereas by stripping the stems of their foliage and supplementing this by foliage of other Chrysanthemum plants the freshness of the blooms is retained. It will thus be seen that each exhibitor will have to stage sixty blooms, and if some half a dozen or more entries are

received for this one class, they will make a fine display. The society has received the generous support of Messrs. James Green and Nephew, of Queen Victoria Street, E.C., who have designed and specially prepared glass vases for this purpose, and are lending them solely for this unique display. Each exhibitor will have vases alike, and as abundance of space for each vase will be allowed, it will readily be seen that the prospects of a striking display are good. There is good reason to suppose this class will be arranged in St. Stephen's Hall, where cooler conditions always prevail. The liberal awards, viz., a large gold medal and £20 for first prize, a similar medal and £15 for second, with two other handsome prizes should ensure a display of high quality. Smaller classes for six blooms Japanese Chrysanthemums, one variety only, arranged in a vase, are in two instances provided for less ambitious growers. A step in the right direction has also been taken with regard to single Chrysanthemums. Provision has been made for exhibiting these in vases, and two classes, one for twelve and another for six vases of these interesting flowers, are provided. Each vase is to contain six blossoms—a distinct advance upon the old method of dumping sprays of three blossoms on boards, as heretofore observed. Both the large-flowered and small-flowered types are included, so we may rest content that at last these useful blossoms will be represented in a fitting manner. Not the least interesting is a class providing for a collection of cut blossoms of Chrysanthemums illustrating the different types of form, colour, and size. It is specially stipulated that each exhibit must contain examples of not less than six of the ten sections enumerated in the National Chrysanthemum Society's Jubilee edition of the catalogue, and there must be at least one representative of both the pompon and single types. Each collection is to be arranged on a separate table, and set up in specimen glasses or small jasper vases. Most persons will agree that an exhibit of the kind just described will serve an excellent purpose, and ably illustrate the respective merits of each type of the flower. Apart from these new features there are several classes for tables containing bouquets, wreaths, &c., illustrating the decorative value of the Chrysanthemum; also others for epergnes, vases of pompons, hand-baskets, and posies, in which there is usually a very keen and spirited competition. D. B. CRANE.

Foreign Chrysanthemum shows.—The French National Chrysanthemum Society will open its fourth annual show and conference on November 3 next. The place of meeting will this year be Lyons. There will be a three days' show, and during the conference, papers will be read on various subjects relating to Chrysanthemums by members of the society. The exhibition is expected to be a very fine one, and visitors from very distant parts are to be present. M. Viger will preside. The Paris Chrysanthemum show will open on November 8, and will be held, as before, in the gardens of the Tuileries. The Italian National Chrysanthemum Society will hold its second show in the Palace of the Fine Arts at Milan. The date fixed is November 9 to 12.

NOTES AND QUESTIONS.

Chrysanthemum Wattle Blossom is a distinct colonial novelty. It is a Japanese, very globular in form, but having long twisted grooved florets. The colour is a fine deep shade of lemon-yellow.—C. H. P.

Chrysanthemum Kathleen Rogers is a Japanese incurved flower, with very broad, grooved florets, which are long and very substantial. It is said

to be an easy one to grow and the colour is a very chaste shade of white.

Chrysanthemum Lemon Queen.—This variety is little known, but it is an excellent early-flowering one. Its blooms are deep yellow rather than lemon, and in quality they are first-rate. Not, however, for large flowers, but for the supply of a short bushy specimen plant to give a wealth of colour or for cutting this sort is to be recommended.—S.

Chrysanthemum Ambroise Thomas.—It is a pity this brilliantly coloured kind is so late in flowering—too late, indeed, to be of much service in the open ground. While not exactly of the same tone, it is sufficiently near to remind one of the brilliant and dwarf kind Tokio, now only rarely seen. The above variety, however, is of better habit and produces larger clusters of flowers.

Chrysanthemum M. Louis Remy.—Amongst the numerous sports from Mrs. C. Harman-Payne a novelty called M. Louis Remy is just now in very good form. This is a sport from the white form Mme. Louise Remy, with which it must not be confounded. In form M. Louis Remy is similar to the parent, but the colour is a very pale yellow of the purest shade.

Chrysanthemum Mrs. White Popham.—This variety gives a pink colour at once pleasing and effective. It produces blooms of large size and noted for the depth of build. The florets recurve and curl slightly at the tips. Somewhat early, it is now fully expanded and sturdy in growth; at least, it is not of tall habit and is easily grown. This, I believe, was raised from seed in England, and is likely to be esteemed for exhibition.—H. S.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 23.

THE meeting of Tuesday last was a very full one, and at the same time quite representative in each department of gardening. Possibly the exhibits of fruit by private growers and the trade constituted the chief feature. From the former sources there were large exhibits of Apples and Pears by well-known supporters of the society, notably from Frogmore, The Hendre and Syon, whilst another capital exhibit came from Handcross Park, whence plants are more frequently sent. A smaller collection of highly-coloured fruit came from Dropmore. All of these exhibits were thoroughly representative of their various districts. Vegetables, too, were present in good quantity, a trifle over-large amongst the roots perhaps, but shapely nevertheless. The exhibit around which there were the most sightseers was that of Covent Garden produce sent by Mr. Monro, this exhibit being illustrative of his lecture during the afternoon, viz., "The Growth of the Fruit Trade." Here was to be seen the cream of the produce sent to Covent Garden at this season of the year, both of home growth and by importations.

Amongst flowers the Chrysanthemum held the sway, and it is safe to say that no more beautiful exhibit will be seen this season than that from Framfield by Mr. Norman Davis. In many respects it was an ideal exhibit of this popular autumn flower, being illustrative of the best methods of arrangement in baskets, vases, and the like. Japanese varieties largely predominated; pompons, too, were beautiful; but, singular to say, the old type of incurved was noteworthy by its absence—yet not singular, perhaps, when one thinks how little these formal flowers lend themselves to purposes of artistic decoration. Quite in contrast to this exhibit was another—a group of plants in pots, each plant to its regulation height from front to back, right to left, as formal as it was possible to make it. This exhibit was, all the same, of capital quality, being further set off by groups of highly coloured Crotons and Dracenas, one on either side. Another group of Chrysanthemums consisted of October varieties for cutting and for outdoor uses. Of cut blooms there was a splendid lot, well arranged, from Devon and a smaller lot from Surrey (Earlswood). Amongst these latter were some tasteful arrangements of decorative varieties. The useful Begonia

Gloire de Lorraine was shown from Edmonton, being prettily intermingled with Ferns, &c. Roses were present, but not in any great quantity, but of the berried plants, as the Pernettyas and Skimmias, there was a first-rate exhibit from Highgate, very profuse in berry. Orchids were not numerous, but at the same time they added greatly to the attractiveness of the meeting. Cattleyas were largely shown, notably *C. labiata* in its infinitude of varieties. A few lovely hybrids also were staged, chiefly *Lælio-Cattleyas*. *Cypripediums* do not now come to the front so frequently. A most notable hybrid present at this and the previous meeting is *Cattleya Mantini*, which at any rate has *C. Bowringiana* as one of its parents, to all appearance *C. Bowringiana* × *C. aurea*. There was a distinct improvement in the attendance at this meeting, and the hall was thoroughly well filled with the exhibits. The material at the command of Mr. Wright on this occasion lent itself to producing a good effect, and he took the opportunity of making the best display possible. Fortunately, the hall was not required by the Government officials; hence the anticipated removal for one meeting to the adjoining hall was not necessary.

Orchid Committee.

Awards of merit were adjudged to the following:—

LÆLIO-CATTELEYA DUCHESS OF YORK (*L. crispata* × *C. Gaskelliana*).—This is in the way of *L. C. exoniensis*, the sepals and petals almost white, faintly tinted with delicate rose. The front lobe of the lip is bright crimson-purple except the heavy fringe on the margin, which is bright rose. The side lobes are pale rose, shading to primrose towards the base, the whole of the centre area through the throat rich crimson-purple. The plant carried a four-flowered raceme. From Messrs. J. Veitch and Sons, by whom it was raised.

CATTELEYA PRINCESS (*C. Luddemanniana* × *C. Trianae*).—This is a desirable hybrid, the sepals and petals of fine form and substance, deep rosy lilac; the broad lip rich crimson with a darker shade at the base; the side lobes deep rose-purple, with some yellow at the sides. There are numerous light lines through the base of the throat. The plant has the intermediate characteristics of the parent species. From Messrs. J. Veitch and Sons.

LÆLIA MRS. M. GRATRIN (*L. cinnabarina* × *L. Digbyana*).—In this the sepals are deep yellow, the petals a little lighter than the sepals, the heavily fringed lip deep yellow, suffused and veined on the front with orange-scarlet, the base pale yellow. It is a distinct and desirable hybrid, giving promise that with age it will develop into a really fine thing. From Messrs. J. Veitch and Sons.

Mr. Ed. Kromer, Roraima Nursery, Bandon Hill, Croydon, sent a fine group, consisting of about two dozen plants of *Cattleya labiata*, many of the varieties being remarkable for the intensity of colour both in the sepals and petals and on the front lobe of the lip. One peculiar variety was wholly lilac, the malformed lip flat throughout and almost white in the centre. Several good *Cattleya intermedia*, a good form of *Cattleya granulosa*, and the rare natural hybrid *Cattleya venosa*, in which the sepals and petals are buff-rose, the lip white, shading to yellow, veined with rose in front, purple in the centre, were also shown. *C. Loddigesii* was also prominent. Several good forms of *Lælia præstans* and *Sophranitis grandiflora* were also included. A silver Banksian medal was awarded. Messrs. J. Veitch and Sons, Ltd., were awarded a silver Flora medal for a small but choice group. In the back row were some finely-flowered plants of *Oncidium varicosum* Rogersi. A fine *O. incurvum*, several good varieties of *Cattleya labiata* and *C. Wendlandiana* were also noteworthy. In *C. Eurydice* (*C. labiata* × *C. Aclandiae*) the sepals are deep rose with a bronzy tinge, the petals lighter in colour; the front lobe of the lip rich rosy crimson, shading to yellow at the base; the side lobes rosy lilac. The

plant carried a three-flowered raceme. *Lælio-Cattleya Hermione* has the intermediate characters of the parents. The lip is deep crimson-purple on the front lobe, shading to pale rose, and again to white in the throat. In *L. C. Wellsiana* the sepals and petals are deep rosy lilac, the large lip rich crimson-purple, veined with a darker shade of purple, shading to bright yellow through the throat. *L. C. Epicasta* has the sepals and petals deep rosy lilac, the lip bright rosy crimson, shading to yellow in the throat. Some good forms of *Cypripedium vexillarium*, *C. Charlesworthi*, a nice coloured variety of *Sophranitis grandiflora*, and the lovely *Sophranitis eximia* were also included. Mr. F. Knight, Thundersley House, Thundersley, Essex, was awarded a silver Banksian medal for a nice group, consisting principally of finely-flowered *Dendrobium Phalaenopsis*, some nice plants of *D. formosum giganteum*, several good varieties of *Cattleya labiata*, and *Cypripedium Charlesworthi*.

The most prominent among the amateurs' exhibits was a fine group from Mr. J. Bradshaw, The Grange, Southgate, containing three finely grown plants, beautifully flowered, of *Cattleya Mantini*. The variation among the *C. labiata* was remarkable, the most distinct among the natural varieties being *C. l. glauca*, a pretty form, having a distinct shade of blue in the sepals and petals, the whole of the front lobe of the lip having a decided plum-purple tint, with some yellow in the throat. In *C. l. leucochila* the sepals and petals are deep rosy lilac, the lip creamy white, with a blotch of purple in the centre, veined and suffused with rose around the margins. *C. l. alba vera* is a lovely form with pure white sepals and petals, beautifully fringed on the margins and having a large blotch of crimson-purple in front of the yellow of the throat. Some good varieties of *Lælia autumnalis* and *L. pumila* were also included. A silver Flora medal was awarded. Sir F. Wigan sent *Lælio-Cattleya Gotoiana marmorata*; the sepals and petals deep rose, mottled with purple; the lip reddish crimson, veined with a darker shade of colour, with a yellow tint through the throat. A cut spike of three flowers of *Cattleya Hardyana Lowia*, a lovely form in which the centre of the sepals and petals is suffused with white, and *L. pumila magnifica* with three flowers were also included. Mr. H. Little, The Barons, Twickenham, showed two fine spikes of *Cattleya Bowringiana*, one raceme carrying eighteen flowers. Mr. E. Stanley Clark sent an ordinary form of *C. Mantini* as *C. M. nobilior*. Mr. H. Tate, Allerton Beeches, sent a form of *Lælio-Cattleya Schilleriana* as a hybrid between *Lælia tenebrosa* and *Cattleya Hardyana*. Mr. J. W. Moore, Rawdon, showed the white form of *Cypripedium Charlesworthi*, better known as *C. F. Hardy*. From the Duchess of Northumberland, Stanwick, Darlington, came a fine cut spike of *Vanda cerulea* with twenty expanded flowers, showing good size and substance.

Mr. Veitch, as chairman, called attention to the sad loss the society and committee had received in the death of Mr. Sidney Courtauld. He drew attention to the many useful ways in which Mr. Courtauld had given his services, not alone on the committee, but also as a member of the council of the Royal Horticultural Society. It was then moved that the council be requested to forward a letter of condolence with the widow and family.

Floral Committee.

An award of merit was given to each of the following:—

CHRYSANthemum FLORENCE MOLYNEUX.—A grand pure white kind that should at least satisfy the most ardent worshipper of big blooms. Apart from purity and size the variety is of great depth, and likely to be in the front rank for exhibition. From Mr. J. C. Garner, Rookesbury Park, Fareham, Hants (Mr. N. Molyneux, gardener).

CHRYSANthemum MISS ALICE BYRON.—This is a pure white, in which the purity and exquisite finish are in the highest degree perfect. It is one of the best white-flowered kinds we have seen, the solid blooms also well proportioned. From

Lord Byron, Thrumpton Hall, Derby (gardener, Mr. Weeks).

CHRYSANTHEMUM MISS EDITH PILKINGTON.—This is a Japanese of the drooping type, and not unlike Edith Tabor, flowers very full and of a rich golden hue. From Mr. J. C. Garnier, Fareham.

CHRYSANTHEMUM LE GRAND DRAGON.—Chrysanthemum growers regarded the blooms of this as a maximum for size, the centre being also well filled, a weak point in this being the reverse. The rich gold of the variety is well known. From Mr. W. J. Godfrey, Exmouth.

CHRYSANTHEMUM J. HOOPER PEARSON.—This variety made its *début* a year ago, and is without doubt a splendid kind even among yellows. For richness it has probably few equals, and in every exhibit is one of the first to attract attention. From Mr. W. Wells, Redhill, Surrey.

ADIANTUM BURNI.—At a slight distance there is much in the fronds of this to remind one of *A. amabile*, particularly in the graceful character and general texture. The rootstock, however, is quite distinct, as also the dark stems of the fronds. The pinnules are small and delicate pale green. The entire fronds are of good size. From Mr. W. J. Burn, Cromer.

The Drill Hall on this, as on many former occasions, proved none too large. Strongly to the front, while the season is yet young, is the Chrysanthemum. Mr. Norman Davis, Framfield, Sussex, made one of his superb displays of the flower. In these displays there is none of the endless variety, the dense mound or the overloading of tables with any and every scrap of bloom that perchance had a petal unfolded for the particular day, but in place thereof a few, and indeed a comparatively few, kinds were made the most of by the application of care, forethought and judgment in arranging. There is much to be learnt from such an exhibit; indeed, it may be said to be an object-lesson on how to use the Chrysanthemum. The exhibit occupied either side of one of the centre tables. Giant vases in the midst 3 feet high were filled with handsome blossoms of such as Lady Byron and Mutual Friend, both sterling white kinds; other vases of somewhat smaller size at either end contained blooms of General Pacquie and Pride of Madford; and again smaller vases alternately with the largest were occupied with Annie Provost, a lovely bronze, and Mrs. Coombes, a new pink, and, by the way, a pink of a decided pink hue. This latter is indeed a lovely tone and supplies a long-felt need in this particular colour. For the rest, vases and baskets were occupied in the most pleasing manner with a variety of good things. A vase of *Soleil d'Octobre*, with the aged fronds of Bracken here and there inserted, another with the pink quilled Rayonnante, then a basket of Mychett Beauty, and another of the pretty Mlle. Elise Jordan, the model of the pompon forms, were noteworthy. One or two boards had their quota of good blooms, including Mutual Friend, the lovely pink Amy Ensoll, Miss A. Byron, white; Lord Cromer, crimson; Miss Maud Douglas, purple-pink and white; and Lady Phillips, purple-amaranth. Then in pleasing relief were Michaelmas Daisies here and there, and these with the warm-tinted Bracken made a very pleasing and instructive whole, for which a silver-gilt Flora medal was deservedly awarded. Mr. H. J. Jones, Lewisham, had an extensive miscellaneous group on the floor arranged in three half circles, the centre being of Chrysanthemums in pots, that on the left of well-coloured Crotons, and that on the right variously composed of *Dracenas*, small Palms, Pandanus, and such things, the whole backed with Palms and tall Bamboos. Among the most conspicuous of the Chrysanthemums were R. Hooper Pearson, rich gold; Dr. Harper, fawn; L. Humphreys, bronze-crimson; Miss Brown, pink; *Soleil d'Octobre*, &c., these being margined with Mychett White, with again an outer margin of Ferns (silver gilt Banksian). Mr. John Peed, Roupell Park Nurseries, had a small group of Crotons, Palms, *Dracenas*, *Aralias*, and such things, margined with a pretty *Sonerila*. Messrs. Wm. Paul and Son, Waltham Cross, had three

baskets of Roses, very nice for the season. They were Boadicea (Tea), large, pink, and fragrant; Sulphurea (Tea), a pretty bud and delightfully fragrant; and Exquisite (Hybrid Tea), a reddish carmine, the foliage greatly resembling that of the Hybrid Perpetual class. Messrs. R. and G. Cuthbert, Southgate, had a large group entirely composed of Chrysanthemum Mrs. Wingfield, a pretty pink kind of about 3 feet high. The variety is full of promise as a decorative kind, and in this direction its pleasing colour should stand it in good stead (silver Banksian medal). Mr. T. S. Ware, Tottenham, had a large group of early-flowering kinds, grown apparently in small pots plunged in the open. The group included many of the best kinds, such as Mychett Beauty, Francois Villermot, Gloire de Mézin, orange-gold; M. Chauchard, orange-fawn; Lyon, Blanche Colomb, Ivy Stark, &c. (silver Banksian medal). Messrs. John Laing and Sons, Forest Hill, had examples of topiary work in Box, Yew, and other such things. Messrs. Cannell and Sons, Swanley, had a small group of cut Chrysanthemums. White Quintus is very free; Mrs. E. Vere Freeman, a fine crimson, 3 feet only; Mrs. Frank Gray-Smith, orange bronze Japanese incurved, a very handsome flower; General Pacquie, florets strap-shaped, chestnut red, free and showy; and Ella Curtis, golden, with broad petals, being some of the best.

Mr. J. Forbes, Hawick, brought a group of small plants of Begonia Gloire de Lorraine and Begonia Caledonia, which is nothing more nor less than a pure white form of Gloire de Lorraine. In each case, however, the plants shown were very small, the foliage pale, and the flowers equally so. The plants had in all probability been subjected to too much heat or insufficient light. All the same, there is no doubt as to the affinity of Caledonia, which has a bright future before it. Mr. H. B. May, Edmonton, had a fine group of Begonia Gloire de Lorraine, the plants being models of cultural skill, the flowers richly coloured also. In a setting of choice Ferns and the subdued light of the Drill Hall the plants were very effective. A small batch of the pretty white B. Dregei was also shown (silver Banksian medal). A group of berried plants from Messrs. W. Cuthbert and Sons, Highbury, was distinct among so much flowering material, and comprised varieties of *Pernettya mucronata* and *Skimmia japonica* (silver Banksian medal). Messrs. J. Cheal and Sons, Crawley, had examples of shrubs displaying autumn tints. Thus, *Ribes aureum* had deep crimson foliage, *Cornus sibirica* also crimson, while *Berberis Thunbergi* was almost scarlet. *Quercus concolor* is pretty, but the finest of all is *Q. coccinea*, a very telling plant indeed. Mr. W. J. Godfrey, Exmouth, Devon, had a large table of choice Chrysanthemums, mostly arranged three in a line, in which way a decided idea was obtained of their colour value. The following occurred to us as good: White Swan, a hairy kind, very compact; Mrs. B. Anderson, white; Mme. J. W. Budde, purplish pink; Le Grand Dragon, in very fine form; Queen of the Exe, white, broad short florets, and Corsair, red-crimson. Large Princess flower-holders in the background were filled with Mrs. E. Vere Freeman, crimson; Syrene, a very pretty pink, and Emily Grunderwald, a good yellow. Miss Mary Godfrey, pink, and Ettie Mitchell, soft orange, in the way of a refined *Source d'Or*, were also very pretty. The entire group, considering the long journey by rail, was highly creditable (silver Flora medal). From Earlswood, Mr. W. Wells brought a collection of cut Chrysanthemums, some as large blooms and others of the decorative class. In the former, such as *Etoile de Feu* was shown in two ways—blooms the result of selecting the second crown bud, which produced chestnut coloured flowers, and others from the terminal bud, of a rich crimson hue. Kathleen Rogers, a fine white; Sir Redvers Buller, crimson and gold, a really fine colour; M. Fatzer, gold tinted orange, and Mrs. Coombes, pink, possibly the finest of this shade, were excellent. Of the deco-

rative kinds, Nellie Brown and Mme. Liger Ligneau were both good, a plant of the latter lifted from the open, though protected from frost, being full of bloom (silver Banksian medal). Mr. N. R. Hoffmann, Thurlow Park, West Dulwich (Mr. Thos. Tomlinson, gardener), showed a batch of seedling *Caladiums* to show the variation of colour, all the plants having been raised "from one pod of seed." The term "pod," however, is a somewhat vague and indefinite description in the case of an Aroid, and a single spadix may embrace many ovaries. Mrs. Harry Veitch and Alfred Bleu are said to be the parents, fertilisation taking place April 3, 1899, and seed sown May 17, 1899. Some fifty small plants were shown, these being about one-third of the batch raised, facts which alone prove the inaccuracy of the above statement as coming from "one pod." Messrs. Jas. Veitch and Sons sent trusses of their hybrid *Rhododendrons*, and Mr. J. Warren, Handcross Park, Sussex, had three *Dracenas*—D. Offeri, D. Warreni, and D. Marchamiana. These are all of the narrow-leaved type, though not displaying any improvement on existing kinds.

Fruit Committee.

Awards of merit were given to the following:—

APPLE PARROQUET.—A conical fruit like Adams' Pearmain, but richly coloured, flesh white, soft, and pleasantly flavoured. From Mr. C. Ross, Welford Park, Newbury.

GRAPE REINE OLGA.—In this the bunches are narrow, tapering, berries round, red, sweet, and pleasantly flavoured. Sent as an outdoor variety, having so ripened. From Mr. W. Taylor, Hampton.

There were several very fine collections of Apples and Pears. A specially good one came from Mr. Thomas, The Royal Gardens, Frogmore, comprising 100 dishes of Apples and Pears. Of Pears, very fine were Marie Louise, Beurré Clairgeau, Louise Bonne, Conseiller de la Cour, Beurré Diel, Beurré Superfin, Van Mons, Easter Beurré, Beurré Baltet, and others, and of Apples, Gloria Mundi, Stone's Pippin, Lord Derby, Newton Wonder, Peasgood's Nonsuch, Hollandbury, Sandringham, Claygate Pearmain, Scarlet Nonpareil, Adams' Pearmain, Ribston, Cox's Orange, Emperor Napoleon, and Gascoigne's Scarlet (gold medal). Mr. Coomber, gardener to Lord Llangattock, The Hendre, Monmouth, put up a superb lot of sixty dishes, fruits generally finely finished. He had of Apples Peasgood's Nonsuch, Tyler's Kernel, Bramley's, Belle Pontoise, Sandringham, Prince Albert, Golden Noble, Dumelow's Seedling, Blenheim Pippin, and others; also of dessert varieties, Cox's, Ribston and other Pippins, Wealthy, American Mother, &c.; and of Pears, Durondeau, Beurré Baltet, Beurré Hardy, Beurré Diel, Doyenné du Comice, Beurré Fouqueray, Louise Bonne, &c. (gold medal). Mr. C. Herrin, The Gardens, Dropmore, Slough, had a collection of thirty-six dishes of finely finished Apples set up pleasingly with foliage and small plants, also a good dish of Braby's Late Gage Plum, one of the best keepers. The richest coloured Apples were Cox's Pomona, Striped Beaufin, Tyler's Kernel, Newton Wonder, Mère de Ménage, Adams' Pearmain and Gascoigne's Scarlet. Warner's King, Bramley's Seedling, Gloria Mundi, Grenadier, Lord Derby and Peasgood's Nonsuch were also excellent (silver Knightian medal). A fine collection, some 100 dishes in all, of these fruits came from Mr. Wythes, Syon House Gardens, Brentford, a far from desirable fruit-growing locality. Of the Pears there were very fine Pitmaston, Marie Louise, Beurré Gris d'Hiver, Marie Benoist, Charles Ernest, Glou Moreau, Beurré Diel, &c., and of Apples, Blenheim, Cellini, Prince Albert, Lord Derby, Barker's Seedling, Alfriston, Golden Russet, Hornmead's Pearmain, Hibberd's Pearmain, Margil, Allington Pippin, Cox's Orange, Ribston and other Pippins, and American Mother (silver-gilt Knightian medal). Messrs. J. Laing and Sons, Forest Hill, also had a collection of fifty dishes of Apples (silver Knightian medal). Mr. Marcham, gardener to Mr. J. Warren, Hand-

cross Park, Sussex, had a collection of eighty dishes of fine fruit, Golden Noble, Mère de Ménage, Wellington, Betty Geeson, Gloria Mundi, Curlytail, Ribston, Cox's, Blenheim, and Egremont Russet being excellent. Pears were varieties that have been previously mentioned (silver-gilt Knightian medal). Mr. Pope, gardener to the Earl of Carnarvon, Highclere Castle, set up a superior collection of vegetables, some thirty dishes in all, including Ailsa Craig, Excelsior, Aristocrat, and Ne Plus Ultra Onions, Perfection, Scarlet Model, and Early Gem Carrots, Tender and True and Hollow-crown Parsnips, Ideal, London Hero, Reading Russet, and Abundances Potatoes, fine Early Rose and Al Celery, Beet, Brussels Sprouts, Polegate and Best of All Tomatoes, &c. (silver Knightian medal). Messrs. Cannell and Sons sent from Eynsford a very large collection of vegetables. Autumn Giant Cauliflower, Defiance Cabbage, Ailsa Craig, Excelsior, Cocoa-nut, and other Onions, forty handsome dishes of Potatoes, Parsnips, Carrots, &c., made up a particularly fine display, to which a silver Knightian medal was awarded.

Messrs. Bunyard and Co., Maidstone, sent Apple Mrs. Phillimore, from Mother Apple x Cox's Pomona. Mr. Barnett, Chichester, had Grapes Black Hamburg from south wall and White Sweetwater from east wall, admirably ripened. Mr. G. Wythes sent three small Melons, The Duchess, all nicely flavoured, but over-ripe. Mr. Ross had Apple Rival, same parents as Charles Ross, but, whilst flesh was soft, it lacked flavour; also Apple Opal, which had previously had an award of merit. Mr. Camm sent Apple as Margil, shown at the Crystal Palace as such, and disqualified there. It was found not to be Margil. Mr. Blake, the Gardens, Clendon Park, Guildford, had a fine dish of Round Winter Nonsuch, a fine variety and great cropper, but still little grown. Messrs. J. Veitch and Sons showed Apple Royal Late Cooking, but which seems to be rather early, and a basket of St. Joseph Strawberry, runners in small pots fruiting. Mr. C. Webster, Gordon Castle, N.B., had Plum Princess of Wales, like a Gage. It is a clingstone and flavourless.

NATIONAL CHRYSANTHEMUM SOCIETY.

ON Monday evening last a meeting of the executive committee was held at Carr's Restaurant, Strand, when Mr. Percy Waterer occupied the chair. The minutes and preliminary details having been disposed of, the chairman in a few well-chosen remarks alluded to the services rendered by his predecessor in office, Mr. T. W. Sanders, and explained that owing to the delay in the execution of the society's new medal the testimonial voted to Mr. Sanders at the annual meeting could not be presented before. He had much pleasure in asking Mr. Sanders in the name of the society to accept the illuminated address and gold medal that had been awarded to him. Mr. Sanders responded in suitable terms. The chairman reported upon his attendance as delegate to the meeting of the horticultural section of the British Commission for the Paris Exhibition, and Mr. Harman-Payne alluded to the formation of a new Chrysanthemum society in Denmark, the secretary of which had made inquiries as to affiliation. He also called attention to the Paris, Lyons, and Milan shows, and offered every information to intending exhibitors or visitors. The report of the sub-committee appointed to examine the relations between the parent society and its affiliated branches excited a vast amount of discussion, with the result that it was finally received and adopted. It is intended that the same shall be submitted to the annual general meeting. The report was discussed in sections, the principal speakers representing affiliated societies being Messrs. Weeks, Rundell, Newell, Smith, Cole, Stainton, and Berridge. A statement was presented showing that £45 11s. 6d. was paid in prize money at the recent October show, and the awards of medals were confirmed. The dates for the 1900 shows of

the society were fixed as follows: October 9, 10, and 11; November 6, 7, and 8; December 4, 5, and 6. Eight stewards were nominated for the forthcoming show at the Aquarium, and fifteen new members were elected.

NOTES OF THE WEEK.

Chrysanthemum Miss Alice Byron.—When we see such kinds as this it is obvious that the opportunity for improvement in the flower is not yet exhausted. Exceedingly pure, beautifully refuted, and superbly finished is but a fair comment on this sterling novelty raised by Mr. W. H. Weeks.

Primula capitata.—In a low position in the Kew rock garden a nice group of this species was flowering well a few days since. Many fine heads were well expanded and many more advancing—too late though, as we imagined, to satisfactorily complete their flowering without ample protection.

Androsace lanuginosa.—Though this trailing alpine is among the earliest to bloom in early summer, its profuse flowering is such that it ever lingers with the very latest of flowering plants till far into the autumn months. For its free-flowering as much as its easy culture it is always a welcome plant. In all probability even this flowering, prolonged as it undoubtedly is, may be materially lengthened in warmer, sunnier regions.

Alyssum maritimum.—Quite recently at Chiswick we noted a large number of patches of this pretty plant, evidently the result of self-sown seeds, the plants cropping up here and there among other things on the border. What attracted particular attention was the great mass of pure white blossom that quite hid the foliage from view. Single plants a foot or more across were a pure white mass. It is further worthy of note that these plants have appeared within the past three months, so that anyone desiring a late carpet plant such as this may do well to note the same.

Vitis Coignetiae.—By the same post I am sending you a few trails and leaves of *Vitis Coignetiae*. You will observe what a brilliant colour it is—in fact, it is, along with other autumn tints, much brighter than usual. The plant now covers a wall 26 feet by 12 feet, and has quite taken possession of a large Laurel at the end of the wall. The Snowy Mespilus, Flowering Ash, and Mountain Ash have been most beautiful here. —J. MORRISON, *The Farm, Narrow Water, Warrenpoint.*

* * * Lovely in colour in all ways, the Virginian Creepers are far surpassed in beauty by this superb Vine.—ED.

Kuiphofia multiflora.—I did not expect to have this remarkable species in flower this season. Suddenly, however, two medium-sized plants began to push up their spikes. The leaves of this new species on my strongest plant are each 6 feet long by 3 inches broad. The flower-spike of this one, I suppose, will be over 7 feet in height. In the plants now flowering the dimensions are smaller; the stalk thrown well above the recurring foliage is 4½ feet, the flowering part 1 foot by 2 inches. The individual flowers thickly beset the spike. They are comparatively small, pure white, with long protruding stamens; the pollen is bright yellow. All in all, this species is not so gaudy as some of the red-flowered ones, but it is a very striking and desirable species.—MAX LEICHTLIN, *Baden-Baden.*

Saxifraga peltata.—Despite the fact that this Saxifrage is always cited as a moisture-loving subject—and there is little doubt that the plant revels in moisture—I have never seen it finer in England than at Kew in the uppermost part of the herb garden near the Cumberland Gate. Here there is a bed of it some 9 feet by 6 feet, the growth being thickly spread over the entire area. It only remains to be said that the petioles in a dry season like the present were fully 4 feet high, strong, vigorous, and self-supporting, the leaf-blades being in proportion. Doubtless a good bed of soil exists for its roots, and so fine a group

may also have been well watered. Of this, however, I have no information. But this would scarcely account for all this vigour, which is that of plants in a bit of wet, boggy ground. The position is partly shaded.

Callistephus hortensis.—Those who know the so-called China Aster by the latter name only will naturally be a little surprised, when ordering the above as a novelty of some rank, to find on flowering it they have a very near approach to, if not, indeed, the identical article they have so rigorously eradicated from their flower-beds in the past. Large business houses of repute will doubtless take some trouble to make this clear to their patrons, and if others are not like-minded, not a little disappointment will result. These single forms, however, are now to be obtained in several colours at a few pence per packet, and for filling in vacancies in the mixed border such things will be very useful. Quite a good show of them has been made at Kew this year in just this way beside the No. 7 range, the free-flowering of the plants being quite noteworthy.

Enlarging Brockwell Park.—Mr. C. E. Tritton, M.P., lately presided over a meeting of the executive committee formed for the purpose of acquiring 42½ acres of wooded land at Herne Hill for the purpose of enlarging Brockwell Park. The price asked by the trustees of the Blackburn Estate was considered reasonable. Mr. Albert Larking, the honorary secretary, read a letter from Mr. Lawrence W. Chubb, secretary of the Commons and Footpaths Preservation Society, guaranteeing a contribution of £1000 from a member of that body, provided the extension of the park were secured in two years. The chairman, Mr. Tritton, guaranteed £500 towards the expenses in promoting the scheme, and Mr. A. B. Stevens, M.B., a member of the executive, did the same to the extent of £100.

A mean theft.—On Thursday morning or Wednesday night last one of the boxes we have in our vineries for contributions from visitors in aid of the Royal Gardeners' Orphan Fund was forcibly removed. The box stolen was the one in the most prominent place in our vineries, and always had most in it. I am extremely sorry that such a deserving institution should suffer, and am doing all I can to find out and punish the dastard thief.—JOHN THOMSON, *Clovenfords.*

Grubs in Celery (H. R. Lover).—Your last consignment of Celery stalks and grubs reached me in capital condition. The latter are the grubs of a small fly, probably the Celery-stem fly (*Piophilapia apti*). I do not see how these grubs can be dealt with, as they cannot be reached by any insecticide, living as they do within the leaf-stalks, and the flies are such inconspicuous little insects, that it is difficult to devise any way of destroying them, though spraying the plants with some insecticide at the right time if that were known might be useful. As I suggested in my previous reply, as soon as the crop is off every vestige of it that remains should be collected and burnt, and the surface soil to the depth of 3 inches or 4 inches should be buried as deeply as possible, so as to bury the chrysalides so deep that when the flies try to reach the surface they may be unable to do so.—G. S. S.

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THE GARDEN.

No. 1459.—VOL. LVI.]

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INDEX.

(Illustrations in Italics.)

Chrysanthemums:—	Fruit show, notes on the 356	Tomato Up-to-date 357	Ixias in open beds 362	Eschscholtzias, late-sown .. 366
Chrysanthemum Klondike .. 350	Crystal Palace 356	Tomatoes, notes on 358	Lilium sutchuenense 363	Horminum pyrenaicum al-
Chrysanthemum Mrs. Wiog-	Fruit tree arcades, Challis's .. 353	Vegetables, new 357	Nicotiana sylvestris 363	bum 366
field 350	<i>Fruit tree arcades, Challis's,</i>	Garden Flora:—	Peony, single white 362	Lilium flavum 366
Chrysanthemum R. Hooper	<i>showing mode of protecting</i>	Crown Imperials 358	Peony, single white 362	Primula obconica fimbriata .. 366
Pearson 350	<i>fruit</i> 355	Week's Work:—	Poppy, Mr. Moon's hybrid .. 363	Pyræthrum uliginosum .. 367
Chrysanthemums at the	Grape Gros Colman on Fos-	Kitchen garden, work in the .. 359	Prunella grandiflora Webbi-	Quercus coccinea 366
Drill Hall 351	ter's stock 353	Fruits, hardy, work among .. 359	ana 362	Rose Souvenir de la Mal-
Chrysanthemums—discard-	Grapes Gros Maroc and Gros	Orchids:—	Sternbergia lutea 364	maison 366
ing old varieties 350	Colman 354	Angræcums, wintering small .. 361	Thorn Apple, the 362	Saxifraga Cymbalaria 366
Chrysanthemums, fed & un-	Grape Mrs. Pearson 351	Cattleya Hardyana 360	<i>Thorn Apple growing wild in</i>	Tacsonia Van Volxemi fruit-
fed 350	Logan-berry, the 354	Cattleya luteola 360	<i>Greenwich Park</i> 362	log 366
Chrysanthemums, prospects	Pesch Desse Tardive 357	Cycnoches maculatum 360	Violets, double, protecting .. 362	Victoria regia flowering in
of the season 349	Peach trees, yellows in .. 352	Cypripedium Fred Hardy .. 360	Roses:—	the open 367
Chrysanthemums, rust on .. 350	Peach Violette Hative 352	Dendrobium superbum .. 361	Rose, a fine old 364	Pueblo Gardens:—
Earlwood, Chrysanthem-	Peaches in Sussex 357	Epidendrum purum 360	Rose over parish room at Glen-	Coldfall Wood, closing of .. 363
ums at 350	Pear Bourré Bosc 357	Lælia Dormaniana 360	<i>owen, Delgany, Wicklow</i> .. 364	Southwark Park, Chrysanthemums at 368
Orchard and Fruit:—	Pear Clapp's Favourite .. 357	Odontoglossum, a distinct	Rose Safrano 364	Victoria Park, Chrysanthemums at 367
Apple Bismarck 357	Pear Pitmaston 351	natural hybrid 361	Roses growing too freely .. 364	Societies:—
Apple crop, variability of	Pear Triomphe de Vienne .. 354	Odontoglossum Uro-Skin-	Books:—	National Chrysanthemum .. 368
the 351	Pear Van Mons Leon Leclerc .. 352	neri 361	"Calendar of Flowering	Royal Gardeners' Orphan
Apple Hawthornden 352	Plum Reine Claude de Bavay .. 352	Oncidium crispum 361	Trees and Shrubs" 365	Fund 368
Apple Manks Codlin 356	Plum, the Kentish Bush .. 355	Oncidium incurvum 361	Notes of the Week:—	Royal Horticultural 368
Apple Peasgood's Nonsuch .. 352	Plum Winesour 357	Orchids and fine-foliaged	Abutilon Golden Fleece .. 366	
Apple Rambour Franc 352	Raspberries, late, in East	plants 360	Alyseum maritimum 366	
Apple Red Beitinghelmer .. 354	Anglia 354	Vanda cœrulea 361	Ampelopsis Hoggi—a warn-	
Apple Stirling Castle for	Strawberry Elton Pine .. 352	Flower:—	ing note 366	
small gardens 353	Strawberries, late, for mar-	Anemone Pulsatilla from	Anemone blanda scythica .. 366	
Apples and Pears, pruning .. 354	ket 351	seed 364	Aster John Wood 367	
Apples, late 355	Vines, pruning 355	Aster Coombefishacre 364	Begonia Credneri 366	
Apples, late-keeping 357	Walls, north, value of .. 351	Callistephus sicensis 362	Callistephus hortensis .. 367	
Caterpillars and Gooseberries .. 355	Kitchen:—	Datura Stramonium 362	Cereus triangularis 366	
Figs, late 356	Cauliflower Veitch's Autumn	Gunnera scabra 368	Clerodendron trichotomum .. 367	
Fruit houses, cleaning 356	Giant 357		Dracena Sanderiana viridis .. 366	
<i>Fruit tree arcade, Challis's</i> .. 353	Coal ashes for Potatoes .. 357			

CHRYSANTHEMUMS.

PROSPECTS OF THE SEASON.

THE blooms appear to be rather late in opening this year. Why this is so I cannot say, for the great amount of sunshine we have had should tend to an early flowering season. Probably early selected buds have something to do with it. These usually end in disappointment by not only taking a long time to open, but in the blooms coming not at all true in character. "Many a slip 'twixt cup and lip" is truly applicable to cultivators of Chrysanthemums who endeavour to produce the wonderful specimen blooms so much admired at shows. All appears to be going on satisfactorily, and the hopes of prize-winning are bright until the flowers should be opening their florets; then it is so many mistakes are noticed and the loss of so many buds is felt. Many failures, again, are caused by persons crowding their plants too closely when under glass. This crowding is very frequently met with, and can only be remedied by growing just the number of plants another year to suit the amount of glass that each can command. One notices, too, that an unnecessary amount of fire-heat is often employed, which is harmful. Chrysanthemums opening their flowers in a hot, close temperature do so at the expense of substance. Just enough heat to expel moisture and to keep the air of the house buoyant is all that is needed, because we should not forget that this is a hardy plant. In a few collections that recent trouble which is known as rust is causing considerable anxiety, and is indeed far more killing in its effects than I at one time believed. Yet I am sure that if growers would strive to take measures in spring when the fungus is in its infancy, or in a stage when it may be stopped, the troubles later in the season would be reduced to a minimum. I have known several instances in this neighbourhood where this has been done. The cuttings and young plants have been watched, and should a leaf exhibit

a sign of the fungus it has been promptly removed. Now these same collections are free, or if not quite free, only a spot here and there is observable.

The season is likely to see much improvement in the matter of new varieties. Some of the English-raised novelties are most promising, not only in the production of fine blooms, but in a dwarfness of growth—a merit that has perhaps been somewhat neglected in the rage to get something larger in flower than we have seen before. R. Hooper Pearson already exhibits splendid properties, and is a variety that marks an epoch in its way. It is a distinct advance in colour, the yellow being deeper and richer than that found in any other sort. In substance it is also most remarkable, whilst the shape leaves nothing to be desired. The growth also is robust. Another kind opposite to the above in shape is Mme. Gabriel Debrie, and equally fine in its advance upon existing ones. It is a large, loosely incurving form of exceeding richness, the florets being remarkable for length and substance. The colour is a shade like that of the Malmaison Carnation. This last was produced by M. Nonin, a French raiser, and others of his raising are full of promise. Mme. F. Daupias and President Lemaire may be named in this connection. It is pleasing to note a new French raiser. Good Chrysanthemums from that country have lately meant M. Calvat's only. Those of the latter raiser are certainly fine as usual, but he sends us too many. Some thirty kinds each year is a large number. About half a dozen are found worth growing, the others fit only for the rubbish heap. M. H. Martinet of this year is a first-rate new kind; it gives us a colour much wanted—namely, crimson. Others not yet very far advanced in opening look distinctly promising. His variety of last year, General Paquie, was, I think, quite the best variety exhibited at the recent Aquarium show. It is rich bronzy yellow in colour, and in form not unlike Mme. Carnot. The sort is dwarf, easily grown, and an early and abundant bloomer.

A new rule of the National Chrysanthemum Society in respect to its floral committee is already causing a certain amount of strife. Rules relating to the award of certificates to new flowers should be stringent, and the members, too, should make it a point to be present so as to form a quorum. Personally, I do not see anything wrong in requiring that three-fourths shall vote for a new kind before it shall obtain the coveted award. This will set a very high standard, which is right. There is a danger of getting too many varieties of Chrysanthemums. New shades of colour and improved forms are desirable, also better and sturdier growth, but to go on increasing whites and yellows that differ so little from those already in cultivation will end in disappointment. Much interest also centres in the new way cut Chrysanthemums are to be exhibited in an important class at the forthcoming National show. I do not suppose the old-fashioned mode of showing specimen blooms on boards will for some time be done away with, but we have never had a similar class—in London, at least—where so many vases of well-grown flowers are likely to compete for prizes. It should therefore be one of the features of the season. Another novelty is provided by a well-known specialist. Single specimen blooms will be exhibited in competition of the most distinct shades of colour from white to crimson. This should be most interesting.

It is to be hoped that this season we will see better grouping of Chrysanthemum plants. In London and the larger provincial shows there is little that one can find fault with. The smaller exhibitions, however, have much to learn in the matter. Competitors endeavour to crowd as many plants into as small a space as possible and these are placed to give the whole a geometrical outline. I would suggest, then, that fewer plants be used and the plants stood in a more natural way, so that the individual excellence of each can be seen. Groups as generally seen would not be so arranged by the

same men to decorate conservatories at home, and less strictness as to tying each bloom perfectly upright and less care to get the whole perfectly flat would tend to a far more telling arrangement.

H. S.

FED VERSUS UNFED CHRYSANTHEMUMS.

I NOTE with interest the remarks of your correspondent "J. B. S." upon an important item in the successful culture of Chrysanthemums in town gardens. I believe that even under the most favourable conditions for the flowering of these plants many failures can be traced to indiscriminately gorging the plants with liquid manure and fertilisers. The action of nitrogenous manures always induces an increased luxuriance and growth, and the two articles specified by "J. B. S." are used essentially for their nitrogenous virtues. Their application is attended, therefore, with considerable risk when frequently used, because often no adequate effort is made to supply any deficiency of mineral constituents in the small amount of soil a pot contains. Without a plentiful available supply of such substances as potash and lime notably, the extra growth often remains immature and rank, and consequently, although large and promising buds are produced, there is, as your correspondent suggests, not sufficient inherent strength to withstand the foggy and damp weather that October and November certainly bring in their train in a town garden. The natural sequence to this lack of solidity and maturity is that when the plants are housed, perhaps in suitable houses, interrupted and diminished light, less air, less room, and higher temperature speedily cause a breakdown in the enfeebled system of the plants, and the gorged buds fall an easy prey to damp and decay. Given a good soil from the commencement, it contains all the necessary organic and inorganic materials for the plant's growth, and in such a sturdy, mature, and ripened growth without feeding can easily be had, producing a plant that will give little anxiety when under glass.

The plan that I adopt is to use a good mellow loam, and in the final potting a small amount of wood ashes and a little manure from a Mushroom bed of the previous autumn are added. Pots varying from 8 inches to 10 inches are used, and after potting they are plunged to their rim in either a bed of cinder ashes or the open border, as I find sheltering the roots from the scorching sun is a distinct advantage. The plants so treated this present season are as fine as one can see anywhere, in every case the dark leathery leaves being retained right down to the pot, notwithstanding some varieties have reached nearly 7 feet high. For the most part they carry three flowers, but others from four to nine. No artificial manure has been used at all outside, but they have had one application of sulphate of ammonia since housing; still, they will receive no more.

In spite of the damp and foggy weather that has been so prevalent in London, no difficulty has been experienced with the flowers that have opened and none is anticipated with those that remain, although the house that accommodates them is in a specially damp situation.

Finsbury.

A. B. J.

Rust on Chrysanthemums.—This season there are, judging from my own experience and observations, more complaints of the ravages of this dreaded disease than last year, and what is worse is that it sets in the more rampantly after they are taken indoors and the blooms are developing. Veltha, a specific for fungoid diseases, has been used by many, and in one instance I have met where it has been constantly used throughout their growing season there is no trace of disease among several thousand plants. This is a remarkable testimony for the fungicide, because last year the same grower had nearly the whole collection spoilt with it. Petroleum followed up is a good remedy, and plants syringed with this often, I find, are not much given to ordi-

nary mildew, an item certainly of importance and worth bearing in mind for another year. In my own case the disease has been much more virulent than in any previous year; indeed, there have been only a few plants infested before. Some kinds seem much more subject to the disease than others. Golden Gem, Golden Gate, and Lady Lawrence, the two first named in particular, are instances in which the disease is the worst, and the rapidity with which it spread on these was amazing. Veltha or petroleum must be freely used from the cutting period onward. It is curious that from some gardens rust should be quite absent.—S.

Chrysanthemums.—Discarding old varieties.—We have grown a considerable number of varieties within the past fifteen years and discarded a great number too, but I sometimes think there are old sorts which would give a good account of themselves if cultivated as they used to be and placed beside the favourites of today. This thought occurred to me at the recent Aquarium show when a fine bloom of the variety Nyanza was seen in one of the stands. This is uncertain, I know, but the rich crimson colour with old gold reverse is rich indeed, the wide petals forming a strikingly handsome flower. If Mrs. C. H. Wheeler could be seen as it used to be, few kinds of the present day could equal it in effect. Then Mme. C. Audiguier occurs to me. The tall habit of growth is against it, but the rich mauve colour and its wonderful arrangement of petals give it special attractions. Belle Paule again. What grace of form and delicate Pico-tee-like shades this used to give. In Thunberg we obtained a perfect informal pyramid of clear golden yellow. Triomphe de la Rue des Châlets used to be compared to a new flower-pot upside down, so rich was it in its terra-cotta shade. Criterion, nothing like it now, and Mlle. Lacroix gave blooms of most charming form and finish. Col. W. B. Smith is another splendid kind. Jeanne Délaux is not even now beaten in dark crimson colour. I would not like to grow exhibition blooms entirely from the old material, yet venture to state that if the above were produced now in their old form one would stand a very good chance indeed in competition.—H.

CHRYSANTHEMUMS AT EARLSWOOD.

MR. W. WELLS' nursery at Earlswood is generally one of the most interesting places during the Chrysanthemum season, for, besides having the advantage of being far enough away from the metropolis to secure good light and pure air, which always do so much to improve the general appearance of the plants, one is sure to find a very extensive collection of the newest and best novelties of the season. The cultural skill brought to bear upon the plants has resulted in some grandly developed blooms, and as the month advances, so the flowers will be proportionately more numerous than at the time of our visit, which was rather earlier than usual. On entering the large span-roofed greenhouse in which the plants are displayed, the visitor will not fail to observe some very handsome blooms of Kathleen Rogers, a noble white Japanese of fine form with broad grooved, drooping florets, and then close at hand is R. Hooper Pearson, whose fine massive deep golden yellow blooms make it a most conspicuous object. Very pretty and smaller in size is Mrs. Coombs, of a delicate lilac-mauve. Then towering high aloft are several monster blooms of Mrs. White Popham, with which Mr. Wells was so successful last season and which for exhibition may take a front place on the show board. Lord Ludlow (yellow), Emily Towers, Lady Phillips, Jane Molyneux, the new white Japanese, and others are all in excellent form, and well maintain the credit of the home raisers.

Continental varieties are always a feature at Earlswood, and are as well done there as anywhere. Of these, Calvat's recent novelties are best dealt with separately, and it may be said that one of the very best is Le Grand Aragon, a huge golden yellow Japanese of a most attractive

kind. M. Fatzer and President Bevan are both big, solid, compact incurving Japanese flowers, varying in their tones of yellow. Mme. Lucie Recouru is quite new this year, and is a large purple-amaranth-coloured flower. Soleil de Décembre belongs to the broad-petalled Japanese incurved group, the colour rich golden yellow. Others from the eminent French raiser include M. Chenon de Leche, always good and unique in its beautiful mingling of warm salmon-rose and gold; M. H. Martinet, crimson and gold; Mme. C. du Terrail, General Paquie, warm terra-cotta, very pretty and effective; Mrs. J. Lewis, Mme. Gustave Henry, another one with a reputation; Marie Calvat, Mme. Aristide Rey, and many others too numerous to mention. Other French raisers, of whom M. Nonin, of Paris, is perhaps the chief represented in Mr. Wells' collection, contribute some very useful and promising novelties. We specially admired François Pilon, a very deep rich golden yellow with long florets and a very large flower. A very interesting pale yellow sport from the white form of Mrs. C. Harman-Payne is found in M. Louis Remy. Amateur J. L. Chaplais is an unusually fine exhibition type of bloom, and has grooved florets of a reddish salmon colour with golden bronze reverse. Some others from the other side of the Channel were Mlle. J. Lieber, President Felix Sahut, Mme. G. Debrie, Le Marcadeon, Etoile de Feu, and Marguerite L. Silhol.

It is curious that there seem to be no new American seedlings this year in spite of the competition that arose from this source a few years ago, but in place of it we have now to consider a wonderful addition to our lists from the Australian colonies. Like all those mentioned previously, the varieties belong to the various types of the Japanese section; we saw nothing in the way of an incurved or Anemone-flowered variety, and, indeed, the Japanese seems to monopolise the field wherever introduced. Some of the Australian seedlings are well known, such as Oceana, Pride of Stokell, Mr. T. Carrington, Australie, Pride of Madford, and others. In addition to these, Nellie Pockett, a beautiful white, and John Pockett, deep crimson and gold, were seen in excellent form last season and with good results, and this year they are quite up to their reputation. Mermaid is a new fine white Japanese of good size, but not so large as some in the same colour. Wonderful is a large, promising variety, having a broad floret of chestnut-crimson, with reverse of golden bronze. Lady Janet Clark has very long quilled florets, colour purple-amaranth. Wattle Blossom is quite new and is a fine addition; the florets of great length, drooping and twisted, and the colour a pale lemon-yellow. J. R. Upton is another of similar tone. Miss Lucy Cheeseman is yellow, but has a greenish shade with it. There are many others from the colonies which promise to be valuable in one way or another, but many of these are not yet named. Miss Ida Barwood, Silver Queen, Lord Salisbury, Australian Belle, &c., will be worth looking out for during the season.

NOTES AND QUESTIONS.

Chrysanthemum Klondike.—This possesses richly coloured and moderate-sized blooms that are of greater service than the more ungainly ones for general use. But in the colour, which is a chief attraction, there is something of that refined beauty which carries great weight even on the market. It is only about 4 feet high.

Chrysanthemum R. Hooper Pearson.—Possibly no finer yellow-flowered Japanese than this has ever appeared, and the number of blooms shown of it are to some extent proof of its suitability to several phases of culture. When blooms of any variety appear good in each and every stand there is hope for the amateur who cultivates but a few plants.

Chrysanthemum Mrs. Wingfield.—The fine group of this kind at the Drill Hall on October 24 showed the pretty tone of colour to advantage. The plants were only 3 feet high, pot included, and the pleasing pink of the flowers attracted attention. In the open ground, however, the plant this year is

not a success, the heat and drought being responsible, we presume, for its all-round blindness. In other respects for the open it would appear somewhat late to open satisfactorily.

Chrysanthemums at the Drill Hall.—Exhibitors of Chrysanthemums who were fortunate enough to be present on Tuesday last were enabled to have an object-lesson in the arrangement of cut blooms, whether it be large flowers of the finest Japanese varieties or the smallest of the pompons. More of such tasteful exhibits as that in question would be a boon to all lovers of the Chrysanthemum. The vase arrangements were really splendid, bold, massive, and imposing, yet in excellent taste.—CRITIC.

ORCHARD AND FRUIT GARDEN.

LATE STRAWBERRIES FOR PROFIT.

THERE can be no two opinions as to the desirability of extending the Strawberry season so that a full supply of fruit could be maintained in the markets of our large towns several weeks longer than is now the case. The Kentish, Hampshire, and Surrey growers are fully aware of the advantages they would obtain by lengthening the gathering time, and they would be only too glad to get the benefit of the considerably higher prices that prevail after the middle of July. It is a fact that in some seasons the great supply almost suddenly ceases, and fruit that ten days or so previously was sold at 3d. per pound would, if then put on the market, command a ready sale at from 6d. to 1s. per pound, according to quality. In a hot dry season it is surprising what a difference a few days make in the amount of fruit sent into the London market. Those who grow several hundred acres of the fruit would heartily welcome any means of prolonging the gathering season, and we may be sure that if culture alone would suffice, it would have been practised years ago by men who are too keenly alive to their interests to neglect any cultural method that would be the means of increasing their profits. Even by utilising the latest kinds we have and cultivating them in the very best manner, I do not see how it is practicable to secure any quantity of fruit after July, in the home counties at least. What can be done in this way in private gardens is no guide to the grower for profit. By growing such kinds as the Elton, Sir C. Napier, or Frogmore Pine liberally in a free, open situation and removing them to a north border in October one may obtain a supply of good fruit several weeks after the same kinds have ceased bearing in the open quarters. Even by this method it is difficult in many years to extend the Strawberry season in the southern counties beyond the first week in August. I grow a limited quantity of outdoor Strawberries for local trade, and am naturally anxious to prolong the gathering time as much as possible, for I find that if the weather happens to be very hot about the middle or end of July the demand for this fruit is very brisk; in fact, I never can quite meet it even at higher rates. My late-fruited kinds are so situated that they are quite screened from the noonday sun. The soil is tolerably holding and the situation rather damp, so that they suffer less from drought than in most places in the locality. In spite of these advantages, I finish gathering in a general way in the first week in August, and this year I had no fruit in the last week of July.

I am afraid that we cannot rely on the hybridiser to help us in this matter. It would seem that a past generation of Strawberry raisers reached the limit of precocity and lateness. We have, I think, no earlier Strawberry than the old Black Prince, and late varieties

put into commerce within the last few years are no later than Oxonian, British Queen, and Elton Pine. I believe that it is possible to have Oxonian at a later date than any other Strawberry in cultivation, and as regards Latest of All I agree with "J. S. W." that this variety is in no wise worthy of the name given it. I saw it growing by the side of Royal Sovereign this season, and there at least it was not more than a week later than the early variety. In connection with this subject, it would be interesting to know whether any of your readers have given the new race of perpetual-bearing kinds a trial, and whether there is any good reason to hope that they may be the means of furnishing an abundance of fruit when other varieties are over. I see that a French firm is putting into commerce several varieties which they declare to be a great advance on Sir Joseph, which is presumably one of the parents. Judging by the high prices asked for them, the raiser or distributor must have a very high opinion of their perpetual bearing powers. A secondary light crop would not, however, do for market growers. It must be possible to obtain a fairly heavy crop, or these perpetual-bearing Strawberries are not likely to find favour in this country with those who must have profitable returns for labour involved in the culture. It is possible that a race of perpetual bearers may in the course of time prove serviceable in extending the Strawberry season, but I fail to see why the London markets should not be plentifully supplied by using the kinds now commonly grown for a period of six weeks after picking from the late-bearing varieties has finished in the home counties. In the extreme north of England Strawberries begin to ripen quite a month later than they do in Kent, and in some parts of Scotland picking does not commence before August. I am acquainted with families in London that are well supplied with this fruit from their country seats in the north for several weeks after they have become scarce in the London markets. The wonder is that it has not occurred to Strawberry growers for profit to give more attention to those localities where, owing to the late ripening of the fruit, it could be placed on the London markets just as the great glut is over. There should be plenty of land in the northern counties available for Strawberry culture, and I feel assured that it could not be more profitably employed. The cost of carriage would, of course, be more than in the case of fruit produced near London, but the grower would undoubtedly be recouped by the higher prices realised. In August good samples would make from 8d. to 1s. per lb., and it is doubtful if anything in the way of an outdoor crop would give better returns. Although convinced that there would be a brisk demand in our large towns during August for the fruit, I am not so sure that such would be the case in the following month. The appetite for fruit varies according to the season, and with an abundant supply of Pears, Plums, and cheap foreign Grapes to choose from, I doubt if Strawberries, however good and plentiful, would find much favour with consumers in September. The fact that good hot-house Grapes have been sold as low as 9d. per lb. during the past month shows how abundant the supply of fruit has been.

J. C. B.

Variableness of the Apple crop.—In the majority of orchards in this part of East Anglia Apples are very scarce. At Blickling fruit of most sorts is scarce, even the so-called never-failing Lane's Prince Albert not bearing. There is, however, one notable exception. A variety named

Colonel Harbord, of which there are some five or six trees, is literally weighed down by the weight of fruit. Mr. Ocle told me that for the last twenty years the trees have not missed a crop. They are standards, and occupy different positions, which is a double proof of its hardy constitution. Colonel Harbord is a local Apple, known only, I believe, in Norfolk and Suffolk. In contrast to this scarcity, a friend of mine who recently visited Wisbeach assured me that thereabouts Apples were abundant, one grower in particular having large quantities. These, if keeping sorts, will, of course, realise good prices.—NORWICH.

The Pitmaston Pear.—I was pleased with "A. W.'s" note on this often misrepresented Pear. Of course, one does not covet the monstrous specimens the produce of trees growing on south walls, and which, by the way, are often less sugary and more quickly become mealy than fruit gathered from pyramids or bushes. I have not "A. W.'s" note by me, but I think he mentions the fact that the latter are usually more russety and of better all-round quality. Such is my experience; indeed, fruit from an espalier tree, although of much less bulk, was firmer, ripened more gradually, and kept a much longer time. It strikes me that many imagine that this variety must have a wall to do it justice, and I must confess to having at one time been sceptical, but was convinced of the suitability of Pitmaston for open garden trees by seeing a number in a midland garden bearing excellent crops. The trees, or most of them, were grafted on other unprofitable sorts and were in pyramid form. The soil was a stiff clayey loam, and the fruit in consequence did not ripen until comparatively late, and was at its best when wall-grown Pears were past. Like "A. W.," I quite think this variety will eventually become a popular market variety.—N. N.

The value of north walls.—We have got so accustomed to look out for southern aspects for all our choice fruits, whether it be on walls or under glass, that I fear we greatly underrate what can be done on north walls, for we too often find them covered with useless creepers, as if the production of really good dessert fruit on them was out of the question. The past season has been a remarkable one in many ways, not the least being that what is considered the favoured southern part of the kingdom was a good deal worse off for fruit than more northern and less favoured parts. I think the crop of Plums was in this locality about the shortest I ever remember, for even the Victoria failed to carry a crop, and one might go along whole walls of Plum trees and hardly be able to count as many Plums as there were trees. The only exception that I saw was on walls with a northern aspect, where some trees were literally loaded with fruit. These trees were planted more as an experiment than with the idea of their proving superior to those on the sunny side, yet such has generally been the case, and doubtless many who have to supply dessert fruits late in the autumn would do well to pay more attention to north walls for Plums, Cherries, Gooseberries, and Currants, for if the trees received as much attention as those on the southern aspects, I believe they would in the majority of seasons prove more reliable.—JAMES GROOM, Gosport.

Grape Mrs. Pearson.—Having on several occasions lately seen this Grape in excellent condition, I consider the fact worth recording, as it is only here and there that it is a success. In each of the above instances the Vines were carrying most excellent crops, the bunches long and tapering—a few only having large shoulders—and they were evenly set with berries from tip to shoulder. The colour and finish left nothing to be desired, the berries were of good size, while the flavour was distinctly that of the Muscat, and delicious. These Grapes had, of course, been grown for private use only; nevertheless, there were bunches among them which would not have disgraced any exhibition table. Taken altogether, they were the finest lot of Grapes I have ever seen of this variety, and my own inability to

succeed with it is the more regretted since seeing it in such excellent condition elsewhere. Soil has, I think, a great deal to do with its succeeding or otherwise, as on the heavy loam here I cannot produce a decent bunch. In each of the above instances Mrs. Pearson is growing in soil of a light description, and which appears to exactly suit its requirements. It is a Grape, too, which likes and really needs Muscat treatment to bring out all its best qualities. It is so delicious a Grape, and such a good keeper withal, that when it does succeed a position at the warmest end of the late viney should ungrudgingly be accorded it.—A. W.

YELLOW IN PEACH TREES.

THIS malady is too familiar to the majority of Peach growers, causing great disappointment, trees apparently healthy suddenly turning from a green to a sickly yellow shade. Some soils seem to favour the disease more than others, the worst cases of yellows probably occurring in strong retentive mediums. In such the roots of the current year do not mature in autumn, especially if such be wet and soulless, and the evil effects are visible the following summer. Cases of yellows, however, though, I think, less frequent, occur amongst glass-covered trees; faulty drainage, notwithstanding which the roots receive a maximum amount of water through the growing season, being the chief cause. In such mediums biennial or, at the most, triennial lifting of the roots is the only means of keeping the yellows in check, adding a large percentage of old mortar rubble, charcoal, or the sweepings of walks and drives, also burnt garden refuse and prunings. In the case of outdoor trees, the roots should be kept above the surrounding level and covered with not more than 3 inches depth of soil. If this is carried out say in October or during the early part of November, according to the season and condition of the trees, just, in fact, when the foliage is assuming a yellow colour, the work being followed by a mulch of leaf-mould or old Mushroom manure, applied not as a stimulant, but as a preservative of the newly-disturbed roots against severe frost, a more healthy and generally satisfactory condition of the tree may be expected the following season. Mixing a small portion of soot with the compost is good in cases of yellows. In none too well drained borders a depth of 6 inches of rubble may be placed beneath the new compost, as the roots in consequence of the occasional lifting practised will not become established lower down. Very firm ramming is also essential, this helping to keep the roots at home.

Trees that are replanted thus shallow will require a good mulch of manure of a short nature the following spring, also occasional waterings, or drought will be liable to affect them, the trees then going from bad to worse. I have noticed that some varieties of Peaches and Nectarines are more susceptible to attacks of yellows than others, and I am convinced that unsuitable stocks which, owing to the increasing demand for trees now-a-days, are frequently used are accountable in some instances for this disorder. I strongly advise those who have a strong soil to deal with to plant on stations, in order to prevent the descent of strong tap-roots, also to raise the border, use plenty of correctives, lift the trees at least every third year, and in order to counteract the evils of drought mulch liberally and feed frequently. I have found that Lord Napier Nectarine and Hale's Early Peach are particularly liable to the above disease.

NORFOLK.

Plum Reine Claude de Bavay.—This is one of the last Plums I would recommend for planting in the open air. Even on walls in cold, late districts I never made much headway with it myself, but have heard of its ripening well in the warmest counties. Those, however, who have an orchard house in which the occupants are in pots or planted out will do well to find a place for this Plum. Here it will grow well if duly attended to

at the roots, set good crops and not fail so readily as some sorts when stoning. I once had a grand tree in a pot which passed the blooming stage in a light, airy greenhouse, but after completing stoning it was removed to a Cucumber house, the being wanted by a certain date. The rapidity with which the fruit swelled convinced me that it was a heat-loving Plum.—J.

Peach Violette Hative.—The advice given to "H. R." by a famous fruit grower always to grow Violette Hative was, as he admits, good. Indeed, I very much question if a better all-round Peach could be named either for gardener or amateur, for Peach house or open wall culture. I admit I have seen partial failures with it where a too rich larder has been given or indifferent culture displayed, but failures with Violette Hative are certainly the exception. When Peaches were to be met with in nearly every garden of any pretension in the eastern counties, clothing high, long walls from summit to base, Violette Hative always made a brave show, and to-day it can hold its own for beauty, high colour, and rich flavour. It is a free, constant bearer, and not liable, like so many varieties, to drop its fruit when stoning. Certainly no Peach house or wall is complete without a tree of it.—B. S. N.

Apple Hawthornden.—I am glad to find that "H. R." has a word of praise for this old Apple. I can remember trees of it growing in Essex orchards nearly forty years ago. As "H. R." states, the trees have a very beautiful appearance when in full bloom, and no better variety can be named for shrubbery or pleasure-ground adornment. Its usefulness is enhanced by the fact that it keeps much longer than such sorts as Lord Suffield and Lord Grosvenor. I would not, however, advise its being planted in cold clay or very retentive soils, as the tree is then liable to canker and the fruit to crack and develop scab. As "H. R." points out, it is well worth planting in espalier or bush form in small gardens that are warm and well drained. I am afraid this Apple is sometimes confounded with the New Hawthornden, which is a much later keeping Apple, though I question if its cooking qualities are so good.—NORFOLK.

Pear Van Mons Leon Leclerc.—I fancy there is an impression abroad that the above Pear is of a coarse, inferior character, but in reality it is, unlike many of the large varieties, of most refreshing and pleasing flavour. Not only so, but with careful storing it lasts longer than many others ripening about the same date. I have noticed that it will hang a considerable time on the tree when on a west wall, and is slower in coming to maturity than such sorts as Marie Louise, Thompson's, and others. The best and most even dish I ever saw was exhibited at Ipswich some years ago. My experience is that the tree is somewhat shy for a few years, but when once it makes a start it yields more or less annually. I have never seen it doing well as a pyramid, or, indeed, in any other position than against a sunny wall even in the most favoured counties. With very liberal thinning and feeding the fruit sometimes attains to a great size, these monstrosities having, I am afraid, told against its popularity. With judicious all-round culture the fruit reaches only dessert size, and then it is a grand Pear.—B. S. N.

Apple Rambour Franc.—Although said to be a very old Apple, Rambour Franc does not appear in catalogues of the present day—at any rate I do not find it in any I have. When I took charge of these gardens a few years since I found one tree, and so struck was I with its crop of handsome fruit that I at once decided on increasing it. This I did in the spring of 1893, and the remarkable growth of these grafts has been often commented upon by those who have seen them. It has a vigorous constitution, free from the attacks of canker or American blight, and usually bears good crops of handsome and distinctly shaped fruits. Here it is growing on a free stock, and forms a large open bush. On the

Paradise stock it should make a fine variety for garden trees as a bush or pyramid. The skin, when the fruit is kept for some time, becomes yellow, and fruits exposed to the sun put on a dull striped red, which much improves its appearance and alters its character from that of those grown under the shade of its somewhat heavy leafage. There are undoubtedly many Apples commonly cultivated that are devoid of the striking characteristics of Rambour Franc. It is, moreover, a fine cooking sort, having a firm yellow flesh with a brisk and sugary flavour. Its season is given as September and October, but it might be kept some time later than this where the conditions for storing are favourable. It is described as 4 inches broad and 3 inches high. In my case the height is greater by 1 inch than the breadth, and in other points it scarcely agrees with the fruit as grown here. It is probable that my tree was obtained many years since from some continental source.—W. S., Rood Ashton, Wilts.

STRAWBERRY ELTON PINE.

A GOOD deal has been written of late about late Strawberries, and Elton Pine has been named by some. It strikes me the variety which will beat it all round for late use when properly grown has yet to be raised. I saw several rows of plants in an East Anglian garden this summer growing by the side of Royal Sovereign, President, and others in an ordinary sunny position, and could perceive very little difference in individual vigour, while the gardener assured me Elton Pine crops well. At p. 313 "A. D." speaks somewhat at random when he says Latest of All will give a peck of fruit to every fruit given by the Queen. I have seen British Queen in soil which suited it growing and fruiting as freely as President or Paxton, but it is capricious, and the same remark applies to Latest of All, though in a less degree. There are gardens in which this, I think, over-rated Strawberry is anything but a success, and as to its lateness, I saw it shown in July in company with Royal Sovereign, Gunton Park, McMahon, and others. Its shape, which although only perhaps of secondary consideration, is the reverse of handsome, added to which is its objectionable green point. One noted grower for sale describes it as a late, but not the latest Strawberry, a fact which the inexperienced and amateurs intending planting should be made aware of, as its name is misleading. "A. D." says that Elton Pine does not do well everywhere, this being evidenced by the fact that it is now seldom grown. But many good old Strawberries are now seldom grown; even the valuable Vicomtesse, which will succeed in all soils and situations, has been to a great extent discarded in favour of perhaps larger, but coarser and worse flavoured sorts.

EAST ANGLIAN.

Apple Peasgood's Nonsuch.—In a recent issue of THE GARDEN "H. R." commented on the fact of his not having seen such fine fruits of this variety of Apple as he did in the previous season. Hereabouts it has done remarkably well, and both in size of fruit and depth of colour the produce is quite equal to that of last year. During the last three seasons a standard tree near here has borne heavy crops of exceedingly fine fruit, which realised high prices when sold. Bush trees in these gardens have also cropped well this season. The single dishes of Peasgood's Nonsuch at the Crystal Palace show were very fine, but I think they were hardly equal to those shown last year. "H. R." says the best results are obtained from wall trees. I have never seen it so grown but once, and that was by Mr. Coleman at Eastnor Castle Gardens some few years ago. I shall never forget the splendid colouring and size of the fruits when I saw them, and have often referred to them when the merits of this Apple have come up for discussion. Mr. Wright (now of Chiswick) when at Glewston Court used to produce magnificent samples of Peasgood's Nonsuch, and which realised prices that to many would appear incredible.—A. W., Stoke Edith.

CHALLIS'S FRUIT TREE ARCADES.

THE illustrations show a Peach wall with glass coping 30 inches wide, the glass (26 ozs. to the foot) being supported at the back by a groove 1 inch deep inserted in the wall plate, and on the front by two copper clips to each square, which are secured to the front plate by two half-inch screws. The front plate is supported by wood standards 2 inches by 2 inches, fixed into cast-iron shoes or sockets, which are driven into the ground at the required angle, the supports at the base being 5 feet or 6 feet from the wall, according to its height. These supports

wood supports to the top, where two shoots are trained horizontally, right and left, in a line with the front plate immediately under the glass to the centre, midway between the supports, where they meet. Two side shoots are also taken from the base of each tree and are trained diagonally right and left to the wires up to the top of each support, crossing each other midway between them. Half way between each Pear tree, and in the same parallel line to the wall, the best late, most beautiful, moderate growing varieties of Apples are planted, or, if thought more desirable, Plums, Cherries, Pears,

pending two or three Strawberry nets from the front plate immediately under the spouting, allowing them to remain till the danger from spring frosts is past, and then permitting one to remain to protect the fruit when ripe. By these means the great expense and continuous labour of providing and manipulating movable blinds or canvas coverings are obviated, ample ventilation and light are consequently secured, climatic conditions nearly similar to those of Southern Europe are obtained, and not only can every tree, branch, and leaf be conveniently inspected, but the necessary work of pruning, training, and cleansing can be performed in any kind of weather without the least inconvenience to the operator.

It may possibly be contended that the trees growing on the front trellises obstruct too much air and light from those growing on the back wall, but experience has proved that such is not the case, and in bright seasons similar to the two last this very partial shade is decidedly advantageous. It may also be objected that the trees growing in these arcades require to be frequently washed and watered, and this is undoubtedly the case, but not more so than trees fully exposed require to be. This apparent disadvantage is more than counterbalanced by the means these arcades afford of withholding water either to the roots or leaves when deemed desirable either for the preservation of the fruit or the due ripening of the wood, especially as the roots of every tree are restricted to the enclosed area. These fruit tree arcades are found to be equally suitable for all aspects as well as for each kind of fruit tree. They completely change the appearance of the monotonous and sometimes unsightly garden walls, and when fully furnished with trees and fruit, represent a money value which, when compared with former systems, is very favourable. When viewed from any point or at any period of the year they do not offend the eye, and when the trees are either in flower, leaf, or fruit, they form arcades of beauty that are charming and picturesque. VISITOR.



Challis's fruit tree arcade. From a photograph sent by Mr. T. Challis, Wilton House Gardens, Salisbury.

are arranged at intervals of 8 feet from each other parallel to the wall. Light cast-iron spouting is fixed to the front plate immediately under the front edge of the glass, down shoots being arranged at intervals of 80 feet so as to convey the rain-water from the coping either into the outside border or into drains, as deemed most desirable. At the base and on the inside of each support are planted the best late and the more tender varieties of Pears, or, if desired, Apricots, Plums, Cherries, Gooseberries and Currants may be so planted. The central shoot from each tree is trained up the

Gooseberries or Currants may be substituted. These trees are trained horizontally to the right and left and are allowed to grow to each upright support where they meet. The branches of all these trees are trained on the cordon system, being pinched or pruned as close as practicable consistent with fruit-bearing, so as not to obstruct the air and light too much from the trees growing on the wall.

It is at once quite evident how conveniently these trees can be protected from the effects of spring frosts, as well as from the depredations of birds when the fruit is ripe, by simply sus-

Grape Gros Colman on Foster's stock.—In his excellent article on early and late Grapes, Mr. Iggulden advises those who may have hitherto failed with Gros Colman on its own roots to try it worked on Foster's Seedling. That his advice is worth taking is proved by the splendid Vines a friend of mine has inarched on that stock. Not only are the bunches long and large—much longer than is usually the case when the Vine is on its own roots—but the berries are of immense size, many of them quite as large as Orleans Plums, and the colour in September is invariably that of the Damson. Other plants of this Grape on their own roots in the same range of vineries, although bearing very creditably and finishing fairly well, are not to be compared either for fruitfulness or general quality with the grafted ones. The house, a lean-to, is not started till the beginning of March, and then for economy's sake only a very little fire-heat is given, the house being closed with plenty of sun-heat when growth becomes active, and yet the Grapes are always black early in September.—B. S.

Apple Stirling Castle for small gardens.

—Mr. Iggulden does good service in bringing this invaluable Apple to the notice of readers of THE GARDEN. In spite of its prodigious cropping character and all-round merits, it is seldom mentioned either in reports of fruit crops or general correspondence. I believe it is more commonly met with in Scotland than in England. I think it has been ignored for orchard planting in standard form on account of the slow growth it makes, but the trees may be planted thicker than ordinary varieties, and in fairly good soil they form neat, compact heads. Probably bush trees of Stirling Castle are as profitable as any, and no

grower for market who contemplates planting should omit this variety from his list, as for small gardens and amateurs Stirling Castle is, as Mr. Iggulden remarks, invaluable. Whether in bush, espalier, or cordon form the trees crop regularly and heavily: so much so, in fact, that unless timely thinning of the fruit is resorted to the trees soon suffer and growth becomes stunted. The individual fruits are of fine shape, though just a trifle flat, skin very smooth, and excellent either for cooking or exhibiting.—C. N.

Late Raspberries in East Anglia.—A few years ago I referred to the excellent supplies of Black Currants and Raspberries in Norwich market late in the season. This I attributed to the climate and the close proximity of the market gardens to the sea coast. This season, in spite of its tropical character, is no exception to the rule of a late supply, as in Yarmouth market on September 9 quantities of excellent Raspberries, as well as Red Currants, were offered for sale, and, needless to say, found ready buyers. Probably it is the autumn fruiting varieties which produce these extra late consignments, but I do not think they could be found in any quantity elsewhere so late in the season. I have, however, previously expressed the opinion that market growers stood in their own light by not turning attention to the production of late small fruits generally. By a little careful study as regards varieties, aspect and general treatment, not only Raspberries and Red Currants, but also Gooseberries might be forthcoming at the date above-named and substantial returns realised.—J. C.

The Logan Berry.—This deserves to be far more widely known than it is at the present day. In habit it partakes somewhat of the Bramble, throwing out from its base, long, vigorous trailing growths clothed with dark green foliage. The berries are of great size, long and rather tapering, of a dark red colour when ripe, and of a very agreeable flavour. It is very suitable as dessert, but more especially is it useful for preserving. The fruit is produced in bunches in great profusion, on wood made the previous year after the habit of the Raspberry. It gives a supply lasting from three weeks to a month, and that period could be considerably extended, by planting on walls facing north and south, &c. It seems to thrive on almost any soil, and is a useful adjunct to either the cottager's garden or the mansion. It is being tried on the estate here as a covert plant, and from what I saw of small bushes planted the previous autumn, will answer the purpose admirably. They had made a quantity of strong leafy growth running away in all directions, while the fruit is readily eaten by the birds. In gardens the best method is to plant at the base of a wall or fence about 12 feet apart. The wall need be no higher than 5 feet or 6 feet. After the fruiting season is over all the old wood can be cut away, and the young wood for next year's fruiting be laid in, in a horizontal direction along the wall. Care should be taken not to tread on the young growth during the gathering season, as it is very apt to get under the feet and be bruised.—P. S. FOLLWELL, *Alnwick Castle Gardens.*

Gros Maroc and Gros Colman Grapes.—I was somewhat struck with the opinions given in the reply on early and late Grapes (page 227), particularly as I had only just read some remarks by a well-known gardener in a contemporary, which presented a peculiar contrast to the views of your correspondent. Mr. Iggulden speaks highly of Gros Colman as a late Grape, asserting it to be far ahead of Gros Maroc so far as quality is concerned. The writer in the contemporary referred to states that Gros Maroc is fast taking the place of Gros Colman as an exhibition Grape, because it colours easier and is superior to it in point of flavour. Here we have two statements flatly contradicting each other, and what wonder then if the amateur is puzzled when experts disagree to such an extent. It appears to be another of those instances where circumstances alter cases, and where the conditions of cultivation have marked bearing on the result. It will be news to many to know that Gros Colman is better

when worked on Foster's Seedling stock than when on its own roots; but it is quite reasonable, for, as is generally admitted, the stock has influence over other kinds of fruits. Why should it not be so with Grapes? As regards the qualities of the two Grapes under notice, I do not consider either of them equal to Lady Downe's, and appearance in most instances is their chief recommendation. In comparing the two it is evident that opinions differ widely. Gros Colman is certainly a fine-looking Grape and its flavour must vary considerably, as I am afraid there are few who can from experience give the Grape so good a recommendation as Mr. Iggulden does. In size, colour, and shape of bunch Gros Maroc is, in my opinion, ahead of the former, and if asked to give a note on the flavour, I should be obliged to record in favour of Gros Maroc, though certainly I have not tried Colman on the Foster's Seedling stock. It would be interesting to learn whether other growers who are also readers of THE GARDEN can champion the cause of Gros Colman as one of the best late Grapes in cultivation. It certainly is not generally recognised as such.—G. H. H.

PRUNING APPLES AND PEARS.

I THINK as a general rule close pruning, such as must be practised with espalier and wall trees of Apples and Pears, will be much less in evidence in the future than it has in the past. Closely pruned trees will be kept in their proper place, and that is where there is not room for a more rational and natural form of training. Some of the advocates of espalier trees cling to them because of the few fine fruits that such trees occasionally produce, and there is, of course, something in this, but as a matter of fact the produce of properly pruned trees grown under less restrictive methods is very little behind that of espalier trees, if any; while a tree, say, six years planted and allowed its head will give more than double the amount of fruit an espalier tree of the same age will. Either form of tree if properly treated will go on and improve after this for a number of years, but a year or two of neglect in the case of espaliers or other tightly-trimmed trees will do far more mischief than in the other case, as many of us have found when taking charge of a neglected place. Yet there will always be positions where espaliers are useful, and it is necessary to study these rather carefully from the pruning point of view.

There is a great want of thought in the manner these are treated and the barbarous methods of pruning that have so long been practised have done more than anything else to bring espalier trees into disrepute. A man is told off to do the pruning, and he snips off every branch as he comes to it to within a couple of eyes of where it started the previous season. In many cases he cuts off fruit-spurs and all to make what is considered a tidy job of it, much as he would trim up a Quick or other hedge. Such methods, of course, need no condemnation from me, but there are others who prune for fruit all right, but allow their trees to push elongated ugly spurs, and by never thinning these gradually get them into a close, thick mass. Small and indifferently flavoured fruit follows, especially if the variety be one that requires room like Blenheim Orange and Bramley's Seedling Apples or Williams' Bon Chrétien Pear. Such kinds as grow very strongly are the least suitable for this method, but by proper pruning of roots and branches may be kept in check so that they give a few good fruits. At the first it is wise not to let any kind of Apple or Pear that has to be afterwards restricted grow away too quickly. Form the branches gradually, and so ensure a uniform number of young growths—afterwards fruit-spurs

—along their entire length. Bare places once caused along the branches can never be filled up, but when there are too many spurs* it is easy enough to thin them, and the branch at that point always shows a disposition to throw out fresh shoots, which may be made use of if necessary. As regards the actual work of pruning, it is the worst of mistakes to do it by rule of thumb. If a prominent and healthy-looking fruit-bud appears a few joints farther up the shoot than one really wants to leave it, there is no harm done by letting it fruit and cutting it away the ensuing year. But in the formation of the fruit spurs that are to be permanent in a manner, it is very important that no more are left than can obtain ample light and air, and in pruning for these a sharp knife must always be used, never secateurs, which, unless they are in the best of order, bruise the bark. As a rule the stronger the breastwood the longer the shoots may be left at pruning time, but the spurs in this case will naturally elongate more quickly, and in consequence the work of thinning down and renewing these will have to be begun early. They should never be allowed to get so numerous or so long that the sun cannot reach the main branches, otherwise these lose their power of recuperation to a large extent and weak, spindly shoots or none follow the removal of old spurs.

But it is a constant fight against Nature this pinching and cutting back of wood, and where there is room to let the tree grow in accordance with its own will, good results are surer and longer continued. And the work of pruning here is practically nil. There are unruly shoots occasionally that take too much of the energy of the plant to the depreciation of the others, but if noticed in time and pinched the temporary check diverts some of the sap to other parts where it is needed, and by causing the shoot to break into two or more prevents grossness. When it is quite obvious that nothing short of root pruning will check the trees, then get at them early in autumn just before the leaves have all fallen and do it thoroughly. Owing to a very short crop of fruit most of my young trees are growing quite vigorously enough this year, but I see no need of interference, and I am sure that from about fifty trees, three years planted, I shall not take an ordinary hand basketful of wood. All they need is a few thin weakly bits removed, for the soil is firm and only moderately rich, consequently the wood though strong is hard and fruitful-looking. H. R.

Pear Triomphe de Vienne.—For some years I have grown this as a cordon, but have never been able to obtain such fine fruits as Mr. Woodward staged at a recent meeting of the Royal Horticultural Society, and which received an award of merit. I am not sure that the best mode of culture for this Pear is a restricted form such as is necessary with cordons, as the tree is a strong grower and the continual stopping is detrimental. Those who have grown it as a bush or pyramid will doubtless have obtained much better results. No one who needs a good early Pear will regret planting Triomphe de Vienne. Fruits grown in the open have the best flavour. I do not know in what position Mr. Woodward's fruit was grown, but there was no question as to flavour, the fruits also being large and handsome. This Pear will be found useful to follow Williams' Bon Chrétien.—S. H. B.

Apple Red Beitingheimer.—It would be very interesting to learn how this variety of Apple succeeds in other parts of the country. Here it is a success, and the one tree I have has produced some remarkably fine specimens this season. In former years the fruits have been what I have considered to be large in size, but

this season they have quite eclipsed all that have been previously produced, both for size and colour. The smallest specimens have not been less than half a pound in weight, while the generality have scaled from three-quarters to one pound each. If it succeeds elsewhere as well as it does here it should prove a profitable early cooking Apple to grow for market, as it possesses both size and great depth of colour, two most important requisites for market work. The tree I have is growing on a heavy red loam some 3 feet in depth, beneath which is a solid bed of the old red sandstone. The tree may be described as a free-growing bush, and beyond keeping the branches thin and properly regulated and pinching in spur-growths in summer-time it receives no other pruning beyond shortening the leading growths back somewhat during the winter months.

early in September. The fruit does not hang long after ripening, and, in consequence of this, during seasons of glut they are of little value to the growers. Plums this season, however, have been most erratic. In most districts the crop has been very light, but there are here and there a few exceptions where trees of the Kentish Bush Plum have been laden almost to breaking point. In these fortunate instances the returns have been favourable, and the growers have realised the true value of this old and common kind.—H. H.

Pruning Vines.—It is a much debated point whether it is advisable to half-prune Vine laterals now or leave them the full length until pruning time proper comes round. The usual idea is that the shortening helps to plump up the basal eyes, but I am doubtful if much good is done thereby.

one season may be closely pruned the next, but the heavier the crop one year, the more latitude must be allowed in that ensuing.—A GROWER.

Caterpillars and Gooseberries.—Your correspondent, Mr. Iggulden, in an interesting article on the Gooseberry mentions the cuckoo's fondness for caterpillars. I am afraid, however, a cuckoo is too erratic a bird to make himself useful in a garden. This year in July I observed that some of my Gooseberry bushes were attacked by caterpillars. I at once purchased some hellebore powder, and the next day was about to use it when I found that the caterpillars, instead of increasing, seemed to have for the most part disappeared. The reason was soon plain; a twitter in a tree close by showed me a blue-headed tomtit, and he was carrying a caterpillar in his mouth to his nest. In a few days the bushes were quite free from caterpillars and the hellebore not required. I cannot say anything in favour of this tomtit's kinsman, the black-headed coletit, which is a dreadful pest in a garden, devouring green Peas and spoiling fruit.—J. H. W. THOMAS, Belmont, Carlou.

LATE APPLES.

MANY present-day planters of Apple trees have wisely decided to include a good percentage of late-keeping varieties, and such seasons as the present must convince us of their value. Early and second-early sorts, particularly those of the Codlin section, are this year behaving very badly, several Apple vendors I have spoken to assuring me that no sooner are consignments stored than decay sets in, rendering them unsaleable. It seems to me that what is wanted in new Apples is a few good firm cooking sorts that will succeed the Sniffield, Grosvenor, Oldenburg, and Ecklinville types and remain in usable condition for a couple of months until the actual winter varieties, which need time to develop flavour, come into use. As far as really late varieties, or those usable, say, from February to May, are concerned, everyone at all versed in the culture and sale of Apples well knows that even in what are termed good Apple seasons it is at the above-named date that sound good tart and sauce varieties fetch the price. Yet, strange to say, in provincial towns at least, one has in the majority of instances to be satisfied with Baldwins and other imported sorts at the new year. There are a few so-called late Apples which, although prodigious bearers and most useful over a limited period, are by many planted far too freely. Lane's Prince Albert, for instance, one word against which will, I doubt not, be by many deemed heresy, is never a firm Apple, and although I have kept it till the middle or end of April, and outwardly it has shown no signs of deterioration, it loses weight and quality in March and needs an injurious quantity of sugar to render it palatable.

I am convinced that some of the very old sorts which seem to be elbowed out of cultivation would still pay well to grow. Mère de Ménage is a grand solid cooking Apple which keeps its weight longer, I think, than any Apple I know, but, according to my experience, it is, like Bramley's, very uncertain as to when it will commence to bear—at any rate as a standard-aged tree apparently being the most profitable. A few of the extra late varieties lack size, which is objectionable in the kitchen, the good old Sturmer being one, but what it lacks in size it gains in quality, the latter being so good, that one eminent fruit grower has pronounced it deserving of a wall. For pies or sauce I know of no better Apple, and that its constitution is hardy is proved by the fact that a tree I had in an orchard exposed to the blast invariably bore a crop in inclement seasons, when the majority of other sorts shed all their blossoms or cast their fruit in infancy. Another grand old keeping Apple is Hambleton Deux Ans. The tree forms a large, spreading head and lives to a great age. I saw it a few years ago in a Lincolnshire orchard, it



Challis's fruit tree arcade. Showing mode of protecting fruit. From a photograph sent by Mr. T. Challis, Wilton House Gardens, Salisbury. (See p. 353.)

The tree is a free grower, and seems to have a very hardy constitution. Perhaps some reader of THE GARDEN who grows this variety will kindly relate his experience of it and express an opinion as to its merits, as no doubt there are others as well as myself largely interested in fruit culture who would be glad to know how it succeeds elsewhere.—A. W.

The Kentish Bush Plum.—This is a very popular Plum for market in Kent, and is extensively grown in nearly all parts. Generally speaking, it is a prolific bearer, and though not of high quality, it is good for cooking and preserving. The trees are grown in orchards and plantations, and often they may be seen planted closely together in rows as a protection for hop gardens and patches of more tender fruits. The fruits are round, purple when ripe, and fit for gathering

It is a good way of getting rid of some of the leaves out of the way of Chrysanthemums and other plants, and may in the case of Vines allowed to run wild do a little good in other directions, but where the laterals were pinched at a suitable length and the sub-laterals kept well back to single or two eyes there is really no need of it. Where, as is sometimes the case, the back leaves have fallen, i.e., those nearest the main rod, then no harm is done. In fact, the Vines may be properly pruned back if more convenient, this resulting in an early and complete rest, especially good for such as are forced early. There is no need to prune back so closely as has often been done in the past, for although Vines may be kept tidier, the chances of getting a regular crop of fine bunches after carrying a heavy one the previous year are lessened. Vines lightly cropped

being the sheet anchor of the fruit room from March onwards. Why has the late Apple of our forefathers, Rymer, been almost elbowed out of cultivation? I have seen my father fill hampers with it in Essex to send to his employer's town house in the late spring months. Colonel Harbord's Pippin is a fine variety for extended planting, the trees, large and weeping in character, being every year laden with medium-sized firm fruit of first-rate quality. It is a purely local variety, but I hope it will eventually find its way into all gardens. Other late sorts which with every confidence be planted are Norfolk Beautin, Yorkshire Greening, and Hanwell Souring. J. CRAWFORD.

NOTES ON THE CRYSTAL PALACE FRUIT SHOW.

I WILL first take the judging by way of showing that, though a person may stage the finest examples, this is no guarantee that he will receive the highest awards. The Royal Horticultural Society, who issue rules for judging, should be careful to employ competent men. I will point out a few of the most glaring blunders. A person to be a competent judge of fruit ought to know each variety, its merits and demerits, so that he could form a comparison. Take single dishes of Pears first, and in looking down the tables note Baurré Diel. It is generally understood that the award should be made to the cleanest, best-grown specimens. The lot that took first prize was certainly a fine dish, but they were coarse and some of them a little specked, while those awarded second prize were a very fine, clean, well-grown lot, and, in my opinion, ought to have been placed first. I should like to know the opinion of other competent judges on this point. It is very strange that while Pears are given every encouragement to be shown coarse and large, the Royal Horticultural Society should put themselves out of the way to state that certain Apples must be small, well-coloured specimens. In the case of Blenheim Orange Apple the wording of the schedule was such that the judges were to make the award to small, highly-coloured specimens. Now all gardeners should know that such can be gathered off trees that are in a very sickly condition, or that have been watered with a solution of sulphate of iron, but such fruit does not possess the flavour of a natural grown specimen from a healthy tree. It would seem that the society has gone from one extreme to the other here. One could hear that the judges differed very much as to this class; they had undoubtedly acted in accordance with the schedule in giving the award to small specimens. It is difficult to account for people's tastes, but the Royal Horticultural Society seems to have peculiar ones over this variety. Some years ago they encouraged the production of large specimens, then they discarded them from the dessert classes both in single dishes and collections; now they say small inferior fruits are admissible so long as they have colour, no matter what their flavour. One more point before leaving the Apples. In not a few instances was fruit wrongly named, and some dishes contained more than one variety. In looking over the sieves that were packed for market, much astonishment was expressed at the way some of them were heaped up. It was impossible to send such by rail without having the fruit bruised when one hamper was placed on the top of another. To pack for market, no fruit should be higher than the side of the basket, or it is liable to get bruised. The aim of the Royal Horticultural Society is undoubtedly right, but it is very misleading to those who visit this great show with a view to seeing the most approved methods of packing to find that awards are given to packages whose contents are exposed to such risk. Much good has been done by these great autumn shows, and since the society has divided the classes so as to show what each county is capable of producing, there has been a greater inducement for people to compete.

I will next take the show from a commercial point of view, and see what the shopkeepers and

general public have to say about these large specimens, which are chiefly bought to make a show in the first-class fruiterers' windows. Being too large to be sold by measure, they are not much sought after. What is required is nice even-sized specimens of from 6 ozs. to 8 ozs. each in the cooking varieties, and from 2 ozs. to 6 ozs. in dessert kinds. Cox's Orange Pippin when well grown is a first-class variety, not too large, and the same may be said of Ribston and others of a like size. Packing to be effectual should be done in such a manner that the fruit can be examined without handling. The fruit, too, ought to be of even size, then, if packed in boxes that will hold just half a bushel containing only two layers, these could be exposed in the shop windows, and would therefore save much handling. Cheap, light boxes similar to those used by the salesmen in Covent Garden for Peaches would be far preferable to the old-fashioned wicker sieves, as these bruise the fruit even when paper is used. It would pay to devote a little more attention to this branch, and if the cost of box were added to the fruit, the purchaser could then please himself as to returning it. None of the examples exhibited presented that neat and tidy appearance one could wish. Why not give prizes for the neatest packed 12-lb. box of choice Plums, and, again, for 24 lbs. of four varieties in so many boxes, the same for dessert Apples and Pears? It is not always the length of journey that should be taken into consideration, for half a dozen or a dozen packages might be put into a train at Edinburgh or Glasgow and would not get shifted until they arrived in London; whereas in going only a short distance on cross country railways they are transferred several times, often wheeled a considerable distance along a platform with other luggage, and stood on their ends or sides, so that distance is not always a criterion to go by. The Palace in some respects is a good place for holding such an exhibition, but it is so out of the way, that too much time is taken up in getting there. C. P.

CLEANING FRUIT HOUSES.

THERE is no greater hindrance to the proper cleansing of Vines and fruit trees under glass generally, and the houses in which they are grown, than the very prevalent custom of flowering nearly the whole of the stock of Chrysanthemums in these structures. To do the cleaning properly of any house, everything else but the permanent trees or Vines should be cleared out. I always begin by having the whole of the trees untied from the trellises, whether these are on the roof or across the house, and the heads are then tied into loose bundles to facilitate getting between them. Rough trellises or boards are laid on the borders, as unless this is done the surface, after getting wet, is trodden into a pasty mass. The roof-glass and rafters should be soaked with water from the syringe or the hose and then be scrubbed with hot water in which soft soap and a little paraffin have been dissolved. Another good soaking of water applied with a good force clears off any chance insects and dirt that remain. All the joints of iron tie rods or trellises should be very carefully attended to, and where it is impossible to get the scrubbing brush in, a small brush should be dipped in turpentine or paraffin and well rubbed in as far as possible. Great care is necessary in using either of these that none is allowed to drop about on the trees. Both are excellent insecticides, but have often worked mischief in careless hands.

At the winter cleaning of Vines, those that were badly infested with red spider should come in for the most drastic measures. Much as I dislike skinning the rods when there is no need of it, it is safest to remove most of the loose bark in these cases, for it is not easy to reach the insects when hidden up under this. Soft soap and sulphur, with a liberal addition of tobacco water if thrips are present, is one of the best winter dressings for Vines. I am not in favour of painting the rods with soot, clay, and other nostrums. The soft soap and sulphur should be thoroughly rubbed

in two or three times, or even more if the insects have been numerous, and with an old blunt pruning knife the loose material from about the old spurs may be removed. Careless pruning of Vines in the early stages has much to answer for in the way of forming a harbour for this troublesome insect. So has planting immediately behind hot-water pipes, where it is difficult to get the hand or a brush to work. These two points should be kept in mind by those planting or pruning young Vines.

Peach trees are even more troublesome than Vines to properly clean, the soda and potash mixture, now well known, being a very useful wash for these either inside or out. It may be used at its full strength for the main branches and stems of the trees where the bark is hard, but it should be weakened considerably for the small green shoots. Careful use of this alone has completely cleared of red spider and scale an old tree of Noblesse that was formerly outside and had a house built over it. The Fig trees under glass are especially subject to scale, and I know of no better way of getting rid of it than by washing with the mixture mentioned and keeping the syringe going at every suitable opportunity while the trees are in growth. All brickwork and other walls should be washed with hot lime. H.

LATE FIGS.

THE value of nice dishes of late Figs is considerable, and most of us are glad of them for dessert at this time of year. I was struck with the generally poor quality of the fruits shown at the Crystal Palace, for, whether grown outside or in, the Fig is so valuable, that it should have due attention to feeding at the roots in order that late fruit may swell up properly and be of good quality. The majority of gardeners perhaps make a mistake in just the opposite direction where they have Figs under glass, and with the idea of swelling off as many as possible of the second crop, apply considerable heat just now when the trees should be steadying down for the winter. For the last two months I have been sending in dishes of Brown Turkey, large, well-ripened fruits from the earlier parts of the new wood, and there they will go on until the fall of the leaf. Yet nothing has been done but to lightly feed the trees with liquid manure after each watering, and the wood for bearing next season is just of the right class, hard and short-jointed without being starved or puny. There is no comparison between wood of this class and that with weak foliage, caused by giving heat and moisture thus late in the season. The effect of overcrowding, too, at this time of year will be only too manifest in spring. I have often been in Fig houses at the end of the year where it is almost impossible to see through the thick mat of foliage overhead. The consequence of this is that the late Figs now being produced do not get proper light and are therefore of poor flavour, while the wood does not finish properly, and therefore produces small, inferior first crop fruits in spring.

To prevent this occurring it is not too late yet to assist the ripening process by thinning out the wood, carefully reserving that which is best placed and which by its position seems most likely to develop properly. Few fruits, if any, will form after this date, and in such a case as the above it will be wise to remove the whole of the fruit now that is too large to stand over the winter—any, in fact, of which the shape can be clearly seen. Respecting the injury supposed to be done to the trees by allowing the late fruits to ripen as described above, this is simply alarm on the part of cultivators. It is quite natural for the Fig to ripen this crop of fruit, and, provided there is proper plant food in the soil and the trees are healthy, not the least harm is done. H.

Apple Manks Codlin.—Referring to this Apple, an illustration of which appeared on page 226, I am surprised it is not met with more frequently, as it appears to be one of the most

useful and reliable Apples we have. For many years I grew it as a half standard in an orchard situated in an exposed locality in the midlands, and it was one of the few sorts that never failed to bear. As a bush tree it does not appear to answer so well, as a market grower in Kent recently informed me that with him Manks Codlin as a bush was so unsatisfactory that he had cut all the trees back and worked another variety on the stems. My experience exactly coincides with Mr. Iggulden's respecting the meagre growth, which I agree with him is owing to habitual heavy cropping. On this account trees may frequently be seen bearing fruit not more than half the normal size, and I have found that to get really fine examples of Manks Codlin the fruit must be judiciously thinned. The Apple is often used direct from the tree, but it is by no means a bad keeper.—G. H. H.

Peaches in Sussex.—After the adverse opinions in the spring, that the Peach crop was to be a failure owing to the severe frosts when the trees were in bloom, one is happy now to look back and report the crop to be over the average. Our trees had 17° of frost in succession when they were in full bloom, but owing to a protection of double fish-net and one thickness of tiffany, no damage was done. I think the covering had a double effect, keeping frost off the trees in the first place and afterwards keeping the early sun off, which generally does more damage than the frost itself. Without a single exception our trees have carried full crops of good quality and with exceptionally few split stones. The outdoor Peach season has been a long one. I gathered Amsden June and Alexandra on the 8th and 9th of July and Salway in the third week of October. Those readers that have not given the Salway Peach a trial should do so. The plant, which is young is on a south-west wall and has carried some 160 fine fruit. The fruit is of a good size, well coloured, and of excellent flavour.—W. RUSHTON, *Cowdray Park Gardens, Midhurst.*

NOTES AND QUESTIONS.—FRUIT.

Late keeping Apples.—I find that all kinds of late keeping Apples were very much more affected by the drought than early sorts, for all the Codlin type swelled out to a good size, but late keepers, such as Wellington, refused to swell even where they were kept well watered.—J. G.

Apple Bismarck.—The majority of large Apples are deficient in colour, but this has both size and colour to recommend it, and, moreover, it is one of the most regular croppers that we have, for although the past few summers have not been anything like good Apple years, the trees of this variety have not failed to carry a good crop. It is especially suited for growing as a dwarf bush tree.—J. G., *Gosport.*

Pear Beurrie Bosc.—This variety must vary considerably in different localities, for many gardeners give it a very second-rate character, but with me, on a light, warm soil, it is one of the surest croppers that I have, and as to flavour, very few Pears give more general satisfaction. It makes an excellent bush or pyramid tree, and the long russety fruits are even better flavoured from these than from wall trees. In the market few sorts find a more ready sale, for when not overcropped it produces fruit just the size for the retailer.—J. G., *Gosport.*

Peach Desse Tardive.—A tree of this Peach occupies the back wall of a Peach house at Blickling. It has done good service in the past, but is now on the wane. Mr. Ocle, however, has decided not to discard it, but to lift the roots and relay them in fresh, sweet compost with a view to giving the tree a new lease of life. It is a variety deserving greater attention—in fact, one of the best late Peaches for flavour. It was sent out by the late Mr. Rivers' father many years ago. Under good culture Desse Tardive grows very large and is of very striking appearance.—NORFOLK.

Pear Clapp's Favourite.—I think it was "A. W." who recently spoke well of this large, handsome Pear. He appears to have been more successful with it than myself. I once had a tree in a pot which produced a few extra large, very showy fruit, but another on a sunny wall grew vigorously enough, but never produced a single fruit. The tree was not by any means gross, so as to need root-pruning, but it

failed to form bloom-buds. I am of opinion that Clapp's Favourite is not what may be called a general Pear—at any rate, one seldom reads of it in reports of fruit crops. All the same, when at home it is a useful autumn variety, though short-lived.—C.

Plum Winesour.—I have frequently referred to the value of some of the reliable latest sorts of Plums, so invaluable are they to the private gardener, and no less profitable to the market grower. To-day I saw on a hawker's cart what I believed was a sample of the true Winesour. The fruits were large individually for that variety and apparently in splendid condition. It hangs well, and, indeed, improves up to the second or third week in November. The tree is hardy, invariably crops well, and the fruit is also valuable for jam. I think market gardeners lose much by not planting this Plum more extensively.—NORWICH.

KITCHEN GARDEN.

NEW VEGETABLES.

ALTHOUGH there will never be cessation to the efforts of raisers and seedsmen to introduce new varieties of vegetables, for new kinds seem to be almost out of the question, it does seem just at present as if there had been something of a lull in the rate of progress or of production previously seen, and that resting was the policy. It is possible that some persons may take exception to this aspect of production in novelty on the ground that they have put this, that, or the other into commerce; but the mere act of doing so does not constitute absolute novelty or distinctness. Even in the Tomato there is practically little that is new. The most marked variety as novel is that beautiful lemon-coloured sport from the Red Peach, which originated at Chiswick, and will be issued to the Fellows in seed shortly. Probably a good deal will be heard of this Chiswick Peach Tomato presently, as it exhibits the best of flavour the fruits produce. The small fruited but immense cropping Glory of Italy is a remarkable variety to grow by those who like the small fruited. Peas seem to have had made to them no notable addition. So wonderfully good are these now, that something remarkable as a cropper is needed to excel the older varieties. Certainly nothing remarkable has cropped up during the year, although there has been no lack of ordinarily good seedlings. Potatoes again show little advance, the two varieties that received awards of merit after trial at Chiswick, The Sirdar, of tallish form with rather deep eyes, and Ellington Seedling, white, having pink eyes, whilst good croppers, were yet not better than many others, but were fortunate enough when cooked at Chiswick to show very fair flavour. In what direction it may be found possible to materially improve Potatoes except in getting into them superior flavour it is difficult to say. The Potato still stands practically alone amongst tuberous roots as edible vegetables. Jerusalem Artichokes, even with the addition of the white-skinned variety, remain just about what these products were fifty years ago, and the *Stachys tuberosa* and *Oxalis crenata* do not promise to ever make popular table products. We are just where we were with Carrots, Parsnips, Beets, and even Onions, for recent introductions have added nothing of value to our stocks. We have nothing better for large bulb production than Ailsa Craig. Large bulbs have so much of the Red Tripoli blood in them that they soon become worthless, even if they do not crack and split out of doors. A much-vaunted flat Onion has proved to be but a reproduction of others precisely alike to it. We still grow Celeries several years in commerce, and which none new excel, and the same may be said of Leeks, also of Turnips, Lettuces, Broad and climbing Beans, and in-

deed of dwarf ones it is doubtful whether any newer ones excel standard varieties like Ne Plus Ultra, Magnum Bonum, White Advancer, or Canadian Wonder. One or two new Cucumbers have been introduced quite excellent of their kind, but they do not exhibit any advance on the varieties that have been three or four years in commerce. Generally there is stagnation in the production of novelties, and no harm is done that it should be so for a time. During the past twenty years there has been great advance, always made slowly. But that great advance renders further advance now all the more difficult. A. D.

Tomato Up-to-date.—For freedom of cropping this is deserving of mention, even though there is such a host of varieties to choose from. In a market nursery visited during the autumn this variety was very highly prized, both because of its free-bearing and smooth fruits, which are of medium size. Many kinds set their early flowers well, but when they advance in growth there is a falling off in the number of fruits on individual trusses. This did not happen with Up-to-date, but, if anything, they were more freely borne on the later trusses. I was so impressed with its all-round merits that I decided to give it a trial another year, and I advise those desirous of growing a good Tomato to do the same.—S.

Cauliflower Veitch's Autumn Giant.—In common with many another good and popular vegetable, this fine Cauliflower is not always kept true, and on several occasions this year I have seen the result of sowing poor strains of seed. The cultivator is at the mercy of the seed merchant in this matter, of course, and though firms of repute doubtless do all they can to grow and purchase clean and true stocks, there is no criterion. But, taken all round, few kinds have stood the test much better than Autumn Giant, and it has now taken its place with what may be termed standard kinds. Over-large Cauliflowers are a mistake, and if grown on very rich soil those of Autumn Giant are apt to be too big, but, given firm soil in good heart and an open position where they grow quickly, the quality is excellent. Many of us have perforce to grow Cauliflowers between rows of other plants, and these in such positions are never so good as where a crop, say, of the earliest Peas is cleared off and the plants allowed all the ground. The seed should be sown in March, and as soon as in the rough leaf the seedlings should be transplanted to firm soil, eventually planting with a crowl on well-prepared land. The produce is very useful from early in October till December.—A GROWER.

Coal ashes for Potatoes.—The value of coal ashes for Potato growing is very small, as "G. H. H." points out on p. 320, and for producing scabby-surfaced tubers there is nothing that can equal them. I had an object-lesson in this way from a gardening friend when living in Hampshire not likely to be soon forgotten. He had an ambition to grow Potatoes for show, and accordingly obtained a collection of the best sorts for that purpose, and prepared his ground well by trenching and manuring. When planting he opened deep drills with heavy drag hoes, and, as he thought, to make success a greater certainty, he scattered a quantity of screened ashes along the open drills prior to covering them. The haulm growth was very fine, but out of all that he had planted he failed to find one single dish of tubers free from scab, and he was so disappointed that he banished the idea of Potato competitions from his mind. In the same ground he had previously grown beautiful clear-skinned Potatoes, which had given rise to his ambition, but his zeal outweighed his judgment for once, at any rate. For improving the working of heavy or badly-drained land coal ashes have a great value, but they should never be freshly given to that which has to be planted with Potatoes. Coal ashes have no manurial value of themselves, but are useful

for mixing with night soil or other powerful manures to increase their bulk and so render them more safe to use.—W. S.

NOTES ON TOMATOES.

— I have not grown any that I like better than Hathaway's Excelsior, or Stamfordian. It is a good early variety, most prolific, produces large, smooth, round and heavy fruit. I think it a good winter sort, though the fruit does not attain the same size as in summer. Perfection is another good variety and very similar to the above; it is also good for planting outside. With me, well hardened off plants put out the beginning of June on a south wall grow from 6 feet to 8 feet by the autumn and produce fruit the whole length of the stem. Most growers have their own special sorts, but for general purposes I do not think the two foregoing sorts can be beaten. I should say the Tomato is decidedly a vegetable. Many persons eat it in a raw state, but I cannot see how it can be classed as a dessert fruit any more than a ripe Vegetable Marrow or Pumpkin.—H. FISHER, *Flixton Hall, Bungay.*

— I have found the old Tomatoes, such as Conference, Chemin Rouge, and Challenger, the best, but I can highly recommend Dickson's Crimson King. Although I have tried many other kinds, I have never found one to equal Early Ruby for outdoor culture. Superb is the best kind I have met with for winter and early spring crops. I consider the Tomato a fruit.—J. FITZ-SIMMONS, *Gaulston Park, Killnean.*

— The best Tomato I know is Chemin Rouge, and find nothing to compare with Dickson's Crimson King for outdoors. For early work I find nothing better than Dickson's Early Ruby. I consider the Tomato a vegetable.—T. MARSH, *The Gardens, Penrhos.*

— I cannot find a better Tomato than Perfection. It is large, handsome, and has good flavour, also sets well. I use this more than any other kind, both inside and out. For early spring crop I find Polegate better than Perfection, as it does not produce such dense foliage, and therefore lets what little sun we have play on the fruit. I have discarded all yellow kinds. I think the Tomato should be called a fruit.—W. J. HARVEY, *Frampton Court Gardens, Dorchester.*

— For several years I have grown but little else than those of the Duke of York or Perfection type. They are alike good in colour, shape, and quality. There are others that set more freely, but the fruit is of inferior quality, and, taking all things into consideration, I have found none to surpass these. The yellow ones, as a rule, do not find favour with the cooks, though for my part I consider them equal, or even superior, in flavour to some of the coarse red ones. I have from time to time tried most of the recent introductions, some of which are enormous croppers, but their size and shape are inferior to those of the Duke of York and Perfection. My soil and situation are unsuited to the growth of the Tomato in the open owing to late spring and early autumn frosts. The soil, too, is heavy, and when there are heavy rains in the autumn the plants soon go off. The best variety I have tried for outdoor cultivation is Carter's Canadian Express. The fruit grows quickly and the plants are robust. It is a good cropper, but the fruit is too much ribbed to be of special value. None of the tender varieties will succeed at all with me in the open, as they grow too rank when the autumn rains set in.—H. C. PRINSEP, *Buxted Park, Uckfield, Sussex.*

— The Tomato is so extensively grown nowadays, and there are so many varieties, that it is difficult to say which is best. My plan is to make a selection of the finest fruits and save seed for the following season. That is for the general crop. For free-setting and flavour I have found none better than Eclipse. There are plenty of varieties much larger in their individual fruits, but few of those are so solid, or yield the same weight per plant. For winter and spring crops, I have found Hathaway's Excelsior, which I grow

in 8-inch pots give capital results. The limited root run I consider an advantage towards getting a good set, and in winter the balls can be more readily kept at a uniform temperature and moistness, than would be the case where a greater body of soil is allowed. It is almost needless to try Tomatoes in the "open" in Scotland, especially in this part, the season is too short for maturing the fruits. I think as long as we have the Tomato cooked in so many different ways as a vegetable, we must class it as a vegetable, although, when speaking or writing we say the fruit of the Tomato. We are all accustomed to seeing Tomatoes in collections of vegetables on exhibition tables, but I have never seen a dish of Tomatoes staged in a collection of fruit.—J. MACGREGOR, *Clifton Park Gardens, Kelso, Roxburghshire.*

— Lawrenson's No. 3 put into commerce this season, is the best setting Tomato that has come under my notice. I have counted as many as 18, 19 and 20 in a cluster, all serviceable fruits, and for flavour it is everything that can be desired. I have grown this for the last three years. Hackwood Park, Ham Green, and Frogmore Selected are first-class. The best outdoor kind is Large Red. The best kinds for winter and early-spring are Frogmore Selected and Early Ruby. I consider a Tomato a fruit.—A. CUNNINGHAM, *Kirkclevington Hall, Yorks.*

— I have found Ham Green the finest flavoured Tomato, also free setting. Vick's Criterion and Austin's Eclipse are also favourite varieties and worthy of cultivation. I find Laxton's Open Air to be the most suitable for outdoor work. The varieties before mentioned are what I use here for early spring and winter. Most decidedly a fruit. I have always understood that whatever followed a flower was designated a fruit, though sometimes classed as a vegetable.—F. BOYD, *Callender Park, Stirling.*

— The best Tomatoes, I consider, are Eclipse and Perfection. They bear nice, even fruits, not too large, and are good croppers. I consider the Tomato a vegetable.—W. PRIEST, *Eglinton Castle, Irvine, N.B.*

— The Tomatoes I have chiefly grown for inside of late have been Glenhurst Favourite and Ne Plus Ultra. Both have done well with me. Outside I chiefly depend upon Stamfordian and The Trophy. I think from the number of people that have acquired the taste for uncooked Tomatoes we might term the Tomato a fruit.—W. MARCHAM, *Wentworth Gardens, Virginia Water, Surrey.*

— I consider that the old Perfection and the many kinds more or less distinct that have been selected from it are far superior in flavour to the smaller fruited kinds that are generally recommended for flavour. I mean those of the Dessert, Peach, and Currant types. The former have a refreshing juiciness and acidity that are peculiar to the Tomato, and although the taste for it may be an acquired one, it is more likely to last than that for the smaller and sweeter types. We have plenty of sugary fruits of better flavour than this class of Tomato, but nothing in fruit or vegetable anything approaching the former. Perfection is not a sure setter unless carefully grown, and very apt to come with brown tip, and, taking the two points into consideration, I should say that Conference, Eclipse, Earliest of All, and Hackwood Park are four of the best varieties in cultivation. Earliest of All is a fine outdoor kind, but slightly corrugated. For early and winter crops I should group it with Chiswick Red and the old Large Red. Although, of course, the Tomato is a fruit, botanically considered, and many people, including myself, appreciate it in an uncooked state, I think it would be going too far to admit it to a first-rate collection of dessert fruit. That is to say, it ought not to carry the same weight as a dish of good Strawberries. But when we see such things as unripe, home-grown Oranges and Citrons exhibited in otherwise good collections, then I certainly see no reason why a dish of nice ripe Tomatoes should be excluded. One is palatable and wholesome, but no one who had arrived at years of discretion would eat the other,

and unless Tomatoes were distinctly excluded from the schedule, I should give them the preference were I judging a collection of fruit. It is a fruit undoubtedly, and the time is bound to come when it will be recognised as such, and it is also a vegetable. A good dish should carry weight in a collection of either, but it must always rank highest as a vegetable.—H. R. RICHARDS, *Coldham Hall, Bury St. Edmunds.*

GARDEN FLORA.

PLATE 1247.

CROWN IMPERIALS.

(WITH A COLOURED PLATE OF FRITILLARIA IMPERIALIS LONGIPETALA.*)

THERE is nothing among bulbous plants flowering in the early days of spring that can equal the Crown Imperials in general vigour or robustness, to which also may be added their showy character and freedom of flowering. One of the things that surprises not a little those taking up their culture for the first time is the rate of their growth. In this respect these Fritillaries are quite unique when we remember that their bold vigour or stateliness is all put on in about a month or thereabouts. Seeing, too, that from well-grown examples—or in the case of freshly-planted roots, strong bulbs would be a more correct description—a stem some 2½ feet or 3 feet high is produced, a good idea may be formed of the progress made.

There is no difficulty in the culture of these plants, for their requirements are of the simplest description. There is, however, fear that late planting and using excessively dry roots may have something to answer for when at the end of a season successes and failures are duly recorded. To plant these things too early is impossible; to plant them very late without the best of reasons or absolute cause is quite unnecessary. Quite unlike a large number of bulbous plants, these do not require the same absolute rest even as do other species of the same group, while to long retain them in the dry state is to rob them for the time being of a part of their stature, and if unduly prolonged to produce blind growths into the bargain. Frequently has the experiment been tried to delay the flowering of these showy subjects, and strong-flowering bulbs have to this end been kept in the dry state till early in January. Instead of doing what was intended, the plants without exception flowered in their natural season, or nearly so, though at about half their usual height and strength. Nor can the loss be said to be complete here, as it is impossible for these long dried roots to perfect in the same degree the same vigorous roots for the year ensuing. I have mentioned these particulars to show that little or nothing is to be gained by any attempt to delay their flowering. Early to flower and early also in maturing, these Fritillaries may with impunity be planted quite early in July should occasion require. At this time, however, it is not possible to obtain supplies from the ordinary bulb merchants, who rarely receive the early supplies before August. This in the ordinary way would be considered quite early, and as a fact any time to the end of November may be taken as reasonable for making a start or planting a fresh plantation. The replanting of one's own stock should, however, be done much earlier. Any good and deep well-enriched garden soil will grow these things quite well, though I have

* Drawn for THE GARDEN by H. G. Moon in Mr. Elwes's garden, Colesborne Park, Gloucester. Lithographed and printed by J. L. Goffart.



never seen them more vigorous and stately than in the clayey soils of Gloucestershire. Here the established plants will reach 3½ feet high.

The bulbs should be planted quite 6 inches deep, and where this is done and room given for development, several years may pass without any disturbance being needed. The kind in the coloured plate to-day is that of a life-size flower with the crown of foliage at the summit. It is certainly one of the very finest of the red forms, of which several are in commerce. Besides this there are good self-yellow kinds and others with beautifully marked or variegated foliage, forming an additional attraction to these stately plants of spring. E. J.

THE WEEK'S WORK.

OUTDOOR FRUITS.

PRUNING.—Most of the leaves having now fallen, it will be advisable to push on with pruning and nailing on all favourable opportunities. The general rule in dealing with wall trees is to leave those on the north walls until last, but, out of consideration for the workers' comfort, I prefer to do these while the weather is still mild, and an early start enables one to spread the work over a longer period, so that there will be no necessity for carrying on work of this sort during very inclement weather. The favourite fruit trees for growing on north walls are Morello Cherries, and these if well looked after give the most satisfactory crops that can be produced in such positions. In pruning the Morello the best method is to cut away the weakest of the young wood entirely and leave the rest to its full length, for the spur system is not suited to the trees. When the weak and ill-placed shoots, including with the latter all foreright growth, have been removed, there is still in many cases too much wood left for the good of the trees, and crowded trees never carry the well-developed, juicy fruits that one likes to have. This crowding is best dealt with by the bodily removal of some of the worst branches, i.e., those which show signs of loss of vigour, after which the remainder will want regulating, so that the wall space may be covered with young wood at as nearly equal distances apart as possible. Before nailing or tying the trees they should be gone over with some insecticide, dealing lightly with the young wood, but scrubbing the insecticide well into the crevices of the old bark, and the walls, too, should be treated with something fatal to insect life, especially if they have not been lately pointed. No matter how thorough the cleaning of the trees themselves may be, the labour will scarcely be repaid unless the walls are also attended to, for there cannot be a doubt that the obnoxious insects which infest our trees during summer hibernate largely in the walls and not on the trees. When re-nailing, the operator should keep an eye to the natural trend of the branches and twigs, placing the shred so that whatever pressure there may be shall be towards the loop of the shred away from the nail. A lack of discrimination in this way, though a small matter in itself, frequently leads to after trouble, for with the pressure against the nail a nasty wound may be formed, and in trees like the Cherry, which are liable to gumming, such wounds rarely heal.

RAISING YOUNG TREES.—The home nursery should be an adjunct of every garden where fruit culture is carried out in the best way, as one can raise a great portion of one's young trees and have them at home and in good condition whenever there is any planting needed. I should like to plead for a good position set apart for all the purposes of a nursery. It is not sufficient to select an out-of-the-way corner hemmed in too much by walls or trees. A nursery ground should be well in the open, and the fact that so very few private nurseries are so placed is sufficient to account for

the unfavourable way in which home-raised trees compare in general appearance with those bought in from a good nursery, where the ordinary details of cultivation are supplemented by a good open position, where the roots have only their fellows to contend with and where the exposure leads to well-ripened wood. Supposing that some such satisfactory arrangement has been made in former years and that the best of the trees intended for planting this year have already been dealt with, the remaining work necessary will be to lift and regulate those intended to be left in the nursery for one or more years longer, root-pruning lightly all those which show a tendency to run far afield, as this will promote the more fibrous condition that one likes to see at the roots. In replanting keep the collars well up, allow plenty of room to each tree, and turn the worst side towards the south to regain the needful balance of branch growth. Trees lifted last year and intended to be planted out permanently next autumn will be best left alone till then, but the gaps in the rows made by taking out those planted this autumn should be filled up by the forwardest plants out of the next set. Younger trees such as those now at two years from the graft should also be treated in the same way, for trees which have been frequently transplanted while young make by far the best for planting and come into fruiting soonest. In planting the nursery stock, supposing the land to be in good heart, or rather that the soil is a good one, I would strongly discourage any manuring, as what is required is a firm woody growth as distinct from that of a gross and sappy nature, and if one imagines later that the trees are not growing freely enough, better results follow from a spring or summer mulching of manure than from digging it into the soil when replanting. The foregoing remarks are intended to apply to Apples and Pears in a young state, and before leaving these I must allude to the necessity of getting good stocks for grafting. For the past few years I have been in the habit of raising seedlings from Apple trees that appear to have the necessary attributes of a good stock, viz., freedom of bearing, healthy and not too vigorous growth, and, lastly, well coloured fruits. I find that stocks so raised are preferable to seedling Crabs, which one can obtain from the hedgerows and from other wild places, but which are sadly mutilated about the roots in the getting. For Pears one may raise Quince seedlings, very slow of growth except in moist soils, or take rooted suckers from free stocks of trees which throw them. The latter are the best in dry soils if one can afford to wait for fruit, but the merits of the Quince in the way of producing early fruiting trees cannot be denied. The latter stock may also be raised from suckers; indeed, this is the usual way, but I prefer seedlings, and once one gets into the habit of sowing a batch of these things yearly, the apparent delay vanishes after a year or two, when those first raised become big enough for working.

HOME-RAISED BUSH FRUITS are also useful and do not take much room. A few cuttings put in yearly will keep the stock replenished; and were this done systematically, only raising just sufficient for the purpose and giving this limited number good attention, fewer of the cankered and worn-out old bushes would be seen in gardens. For cuttings of Gooseberries and Currants, select medium-sized pieces of straight wood, cut into lengths of about 1 foot, and keeping a heel of the older wood to each cutting. Black Currant cuttings should be put in with the buds intact, but all the lower buds of Gooseberries and Red and White Currants should be rubbed out to prevent them from developing into suckers. Notch out the ground with a spade, making the miniature trench about 7 inches deep and with one solid side, against which the cuttings should be placed, and see also that they rest firmly on the bottom; then fill in with soil and tread firmly, so that no air crevices are left round the cuttings. Water the rows in if the soil is at all dry; indeed, it is advisable to use water in any case to close the soil round the cuttings. Then in a day or two

after run the Dutch hoe between the rows to loosen the surface soil.

THE WINTER MOTH.—In orchards where the winter moth is present or feared, no delay should take place before adopting precautionary measures by grease-banding the trees, or using some other means of preventing the female insects, which are now active and taking to their winter quarters in the trees from the ground, from attaining the only positions in which they can prove dangerous to next year's crop. It seems almost impossible to entirely rid our orchards of these pests, but simultaneous efforts in this direction must eventually lessen the evil, and those who have the best interests of fruit culture at heart will not fail in doing their share in the good work. CORNUBIAN.

KITCHEN GARDEN.

STORING ONIONS.—As a rule time cannot be spared for stringing Onions when they are cleared from the ground, this being performed by outdoor hands in wet or unfavourable weather. Take the first opportunity of overhauling the main batch, as sometimes faulty bulbs are not noticed, and if left in bulk soon contaminate others. Lay aside all such, also those inclined to grow out at the neck, in order that they may be used at once, and string on strong tar twine a good percentage of the best and firmest, suspending them from the roof of a cool, airy loft or even outhouse. The remainder lying loose can then be spread out over a larger area, receiving the advantage of more air. Some seem to treat Onions as if they were easily injured by a little frost, whereas the fact is a certain amount of this is actually beneficial, though dryness is essential, drip soon causing decay. I have seen well ripened bulbs hung on walls beneath the eaves of cottagers' dwellings keep plump and sound till late in spring, but there is usually an absence of grossness in such samples. Those lying on floors should be turned over once a week. Choose a dry day for going over the autumn-sown varieties, weeding the rows and drawing out the very small inferior plants. The soil can then be made firm so as to render them more frost-proof. If left in a loose state high winds are sure to loosen them still more and severe frost injure them, especially in heavy, wet soils. Previous to firming, run the Dutch hoe through the rows. Give a liberal dressing of soot and wood ashes in equal quantities, as although it is more often in spring that the bulbs fall victims to the dreaded grub, yet a free incorporation of these ingredients now renders the root-run more obnoxious. It is at the junction of the bulb with the roots that the attack is first made. When speaking of firming Onions, I may also mention the advisability of treating young autumn-planted Cabbages similarly, drawing a little soil up to the stem afterwards.

TURNIPS.—All roots of the Orange Jelly and yellow section generally, also white varieties which have grown to their normal size, had better be lifted and placed in some position, as, for instance, beneath dry Bracken overlaid with coal ashes. Chirk Castle is so hardy that it will stand almost any amount of wet and frost without rotting. It should be mentioned that it is best to use a little less covering on Turnip than on Potato clumps, as overheating in very mild weather causes crown growth, and consequent loss of quality.

THE ROOT CROPS.—The beginning of November brings a considerable amount of labour in the way of lifting Beetroot and Carrots. It is not altogether a question of hardness, but also of the inconvenience of getting at the roots in time of hard frost. Sometimes severe weather sets in unexpectedly early in November, taking the gardener off his guard, but even then matters may be made easier by a little timely forethought in the way of covering with loose littery material, removing the same as soon as a thaw occurs. I do not care for Beet to be exposed to more than 7° or 8° of frost, and I have sometimes adopted the plan of a good old kitchen gardener under whom I served, viz., mowing the Asparagus beds

and laying the baulm lightly over the Beet beds. In the case of the longer varieties of Carrots, such as Long Red, Surrey, and Altringham, which are to be kept till late in the season, a thicker layer of soil or sand should be placed between the roots. Where a large number of Parsnips are grown, a portion of the crop may be left in the ground, drawing up a little soil to the roots with a hoe. Beet may also be treated similarly if sufficiently covered. For general winter use I prefer to lift Parsnips, lay them in soil in a sheltered nook or corner, each root being buried up to the crown, and the whole bed finally covered with Bracken. Thus treated, they are easily reached even in the sharpest or most snowy weather. Salsafy and Scorzonera may also be treated similarly. Jerusalem Artichokes retain their quality better when left in the ground, and after lifting a sufficient quantity of tubers to last for some time the rest of the bed may be covered with Bracken to protect from hard frost.

BROCCOLI.—In many gardens of only limited extent Broccoli is not grown so much as formerly, as gardeners find themselves in an awkward position should these be cut off. They are wise who have substituted the Rosette Colewort, as this will stand the most trying winter, and there is always something to cut at. Nothing, moreover, can be more delicious when well hearted and after exposure to some degree of frost. A few rows of Self-protecting Autumn are always manageable, and being in an advanced hearting condition—at any rate in most autumns before injurious frost occurs—lifting and laying in can be successfully practised, and the supply prolonged often until nearly Christmas. Rough home-made straw hurdles are invaluable for covering shallow brick pits containing this vegetable, as also for protecting Lettuce, Cauliflower, Cabbage, and Endive.

J. C.

ORCHIDS.

ORCHIDS AND FINE-FOLIAGED PLANTS.

THE increasing number of fine-foliaged plants has made it much easier to keep up a bright display in the Orchid-flowering house than formerly. When there is a scarcity of blossom many of these come in very useful, but there is just a danger of this kind of thing being overdone at the present day. I much prefer a group or house of Orchids without any fine-foliaged plants at all other than Ferns, but this is not everyone's taste, and if only sufficient care and selection in arrangement are brought to bear, very pretty effects may be produced. Quite recently I was looking round a garden where Orchids are well done, and a nice lot of *Cattleya aurea* was in flower. This was grouped with some highly-coloured Crotons and small, well-grown bits of *Heliconia*, and the lovely flowers, usually so prominent in any group in which they are used, seemed quite lost by contrast. This is the kind of thing to avoid. Again, yellow *Oncidium*s with green and golden coloured *Acalyphas* or Crotons are wrong. Even against green Ferns, unless the latter are deeply coloured, the effect is not really good, and they want something of a warmer tint. When the spikes stand out as it were from a groundwork of small plants of brightly-coloured *Fittonias* they look much nicer, and this will make a corner to a group that will always be admired. White-flowering Orchids, such as *Odontoglossum crispum* and *Dendrobium Dearei*, look best on brightly-coloured foliage, unless a few more brightly-tinted Orchids, such as *Epidendrum vitellinum*, can be associated with them.

Large healthy specimens of any kind of Orchid always look well in groups, but these, unfortunately, are not much grown now-a-days. It is a little remarkable that a dwarf species

like *Ceologyne cristata* should be so frequently grown on to specimen size when it is not really one of the best or most suitable, while grand old Orchids of the distichous-leaved section, such as *Vandas* and *Aerides*, are represented by little bits. Not that large plants of *Ceologyne* are without beauty by any means, but there is a certain flat look about them, and I always think small, well-grown plants are prettier. These require no other greenery than their own pretty foliage, but a few bits of brightly-coloured *Croton* arranged with them are usually admired. All such Orchids as have no foliage or very little at the time of flowering should be arranged with Ferns only, as these make up for loss of green leaves. In this category come a great many of the Moulmein *Dendrobies*, also *Calanthes*, *Pleiones* and others. Any of the drooping species should be suspended or propped up on small pedestals, never tied up to stakes, as is so frequently done. In the latter case the flowers always look upside down, and it destroys the beauty of the plant as a whole. Many growers object to placing fine-foliaged plants among Orchids because of the liability to propagate insect pests, but this is simply alarm, for Crotons and other plants grown for their foliage are naturally just as cleanly as Orchids. It is only when neglected there is danger, and those who neglect their Crotons usually also neglect their Orchids. In finishing the front of a group consisting of fine-foliaged plants and Orchids, not much originality is usually shown. A fringe of *Panicum* or *Tradescantia*, with a few plants of *Isolepis* or *Caladium argyrites* at regular intervals, seems about the limit of many imaginations. All these are beautiful plants for the purpose without a doubt, but they should be so placed that each plant shows distinctly from its neighbour. It is not treating them well to use them simply for hiding pots in which Orchids and other plants are growing. This could be done with green Mosses or *Lycopodium*, and the pretty little fine-foliaged plants given the advantage of this setting. H.

Cypripedium Fred Hardy.—This is a distinct variety. It is no doubt an albino of *Cypripedium Charlesworthi*. The habit of growth is much smaller than in *C. Charlesworthi*, leaves pale green, spotted, with numerous brown markings on the undersides. The dorsal sepal is white at the top and around the outer margins. Towards the disc there is a very faint tint of colour. The disc is pale green, with a few darker green veinings. The petals are pale green, suffused with brown, and veined with a darker shade of brown, the lip pale pea-green.—C.

Cattleya luteola.—This quaint and interesting little plant is now in flower, and although it is not sufficiently large or showy to become really popular, it is well worth growing. The pseudo-bulbs are small and the flower-spikes do not push up above the leaves as is usual in *Cattleyas*, but cluster just above the top of the former. Each flower is about 2 inches across, yellow, with purple lip markings. In its native place *C. luteola* is said always to grow in dense shade. If kept in a good light position in an intermediate house it will usually be satisfactory. Small pots or baskets are best, as the plants are not very strong-rooting.

Epidendrum purum.—Among the less-known species of this large genus are several pretty Orchids that would be well worth a place in all collections. *E. purum* is not at all showy, but its quaint appearance and the delightful fragrance given off by the blossoms make it welcome as a variety. It grows about 18 inches high, and the flower peduncles are drooping and full, the flowers pale yellow. Like others in its class, *E. purum* is easily cultivated, and thrives well in rather small pots of peat fibre and Sphagnum

Moss over good drainage. The temperature should be that of a cool intermediate house, and ample moisture should be given all the year round.

Cattleya Hardyana.—Quite a number of fine varieties of this beautiful natural hybrid have turned up lately among importations, and in many cases from *C. Dowiana aurea* rather than from *C. gigas*. It is one of the finest of all *Cattleyas*, and many growers, now that its origin has been proved, without doubt will be raising it from seed. Those who have for years been watching importations will be anxious to see how the home-raised plants turn out as they flower, for that there will be good and peer varieties among them one may be perfectly sure. But in any case it is a grand Orchid, of which we ought to have more, and it will be long before our Orchid collections are over-stocked with it. Its culture does not differ much from that usually practised with its parents, the plants liking a position near the roof glass in the warmest and lightest part of the *Cattleya* house.

LÆLIA DORMANIANA.

This plant is not very constant in its time of flowering, the blossoms appearing at quite opposite times of the year. But the pretty olive and crimson blossoms are always acceptable, and I was pleased to note a nice batch of it recently flowering abundantly. The pseudo-bulbs or stems seldom grow more than 9 inches or 10 inches high, but the leaves give the plant the appearance of being taller. The flower-spikes occur at the top of the former. Like many other *Lælias* and *Cattleyas*, its roots are not of that constitution that will push a way for themselves through a great thickness of Moss and peat. To be satisfactory the plants must be crowded into their pots or baskets, leaving only very little room for compost, so that the roots push through it readily and outwardly into the congenial air of the Orchid house. It seldom suffers from want of room, the pseudo-bulbs being very thin and needing much less sustenance than these of the labiate *Cattleyas* or *Lælias* of stouter build. Some of the healthiest plants I have seen were grown in small teak baskets suspended from the roof at the lightest and warmest end of the *Cattleya* house, and this suggests another important point that must not be lost sight of. Many growers are not careful enough when damping between Orchid pots; and the watersplashing on to the compost, one never knows whether it is really dry or wet, and a dry bottom and soddened surface are about the worst state that Orchids of this class can get into. It is bad enough for the strong growers; for the weak ones it is simply fatal if allowed to go on too long. But a position near the glass prevents any danger of this, and if it can be spared it is the best place for *L. Dormaniana*. It is only necessary to see that the young shoots from the base of the old stems are not too suddenly exposed to sunlight in such positions, especially should they have been growing where the light is not so good. Careless watering at the same time is responsible for many of these young leads decaying. Cold water thrown over them or allowed to gather in the young sheaths means their certain death. Just now the roots will be fairly active, and it is important that they are not unduly dried. Kept well up they will ripen the growth made, enabling it to stand cold or other checks in winter, when the water supply must be considerably reduced, but never entirely withheld. *L. Dormaniana* was discovered by Mr. H. Blunt at a considerable elevation in Rio de Janeiro in 1879.

Cynoches maculatum.—Although the individual flowers of this species are not so large as in a representative form of *C. chlorochilum*, it is, nevertheless, a fine Orchid, and the spotted flowers on the drooping racemes are sure to be admired. It is by no means a common species, and only a few plants of it are known, though it was introduced many years ago. In a fairly warm and moist house growth is very free, but

considerable care is necessary when young growths are pushing up that water is not allowed to gather in the centre of these. After the pseudo-bulbs are fully made up and matured the plant needs a long dry rest, and unless it rests well it is very unlikely to flower much. Equal parts of peat fibre, loam, and chopped Sphagnum suit it well for compost, and it looks well grown in baskets suspended from the roof.

A distinct natural hybrid Odontoglossum.—Most Orchid growers are familiar with the natural hybrid *O. excellens*, which is derived from the intercrossing of *O. Pescatorei* and *O. triumphans*, but a cross between *O. crispum* and *O. triumphans* is quite an out-of-the-way occurrence. I recently noted a plant which will, I have no doubt, prove to have been derived from the intercrossing of the last-named species. It may be described briefly as a glorified *O. excellens*. The flowers are each upwards of 3 inches in diameter, the sepals upwards of three-quarters of an inch broad, pale creamy yellow, with a bright yellow suffusion. In the centre there are numerous small bright brown spots, forming almost a solid blotch. The petals are of good shape and substance, yellow on the outer margins, white through the centre and basal portions, as in *O. excellens*; there are also a few brown spots. The lip is upwards of an inch broad, becoming pointed at the apex, the ground colour white, with a large brown blotch in the centre, the toothed disc bright golden yellow.

VANDA CÆRULEA.

This useful Vanda does not receive the attention it deserves at the present day. In Orchid collections it is generally fairly well represented, but in the plant houses of most private establishments one seldom sees a plant. This is to be regretted, especially in places where there is a great demand for plants in flower during the months of September, October, and November, or even well into the month of December. One generally finds that where only a few Orchids are cultivated they mostly consist of summer-flowering varieties, which are often in perfection when the family are away and at a time when there is plenty of other things to use as cut flowers. The winter-flowering varieties, with the exception of *Calanthes*, are almost totally ignored. There are many species which will be flowering during the next two months that would be useful were they afforded the room now occupied by the less useful summer-flowering ones. None of the species are more deserving of attention than *Vanda cærulea*, the long racemes of azure-blue flowers being always appreciated and most useful for cutting. In a recent conversation with a well-known collector, who has probably imported more plants of *V. cærulea* into this country than all the others put together, the altitude at which the plants are found growing in their native habitat was one of the subjects referred to. He informed me that he had gathered flowers in the early morning covered with white frost. To still further confirm the cool conditions under which it grows, Messrs. Veitch in their "Manual of Orchidaceous Plants" give the following interesting information:—

In the Oak woods near the village of Lermar (Khasia Hills) *Vanda cærulea* grows in profusion. The high, grassy hills which it inhabits are elevated from 3000 feet to 4000 feet; the trees on which it grows are small, gnarled, and very sparingly leafy, so that the Vanda is fully exposed to the sun, rain, and wind. There is no Moss or Lichen on the branches with the Vanda, whose roots sprawl over the dry bark. The atmosphere is, on the whole, humid, and extremely so during the rains, but there is no damp heat or stagnation in the air, and at the flowering season

the temperature ranges between 60° and 80° F. There is much sunshine, and both air and bark are dry during the day. In July and August during the rains the temperature is a little higher, but in winter it falls much lower.

I have long advocated a cool, dry resting season for this Vanda, but have generally removed the plants to warmer and more humid quarters during the growing season and up to the time the flowers expand, when they have been removed to cooler and drier positions, so that the flowers may be retained longer in perfection. After the flowers have been removed the plants are kept drier and prepared for the resting season, which then commences. The potting compost used consists wholly of living Sphagnum Moss and clean broken crocks. The repotting is best done in the spring.

I was rather struck recently, when on a visit to Mr. Hudson at Gunnersbury House, to see a fine batch of plants, many of them pushing stout flower-spikes, growing suspended in a lean-to house, the front stages of the house being filled with *Begonia Gloire de Lorraine* and its sport *B. Mrs. Leopold de Rothschild*. The Vandas were hung at the back close to the roof ventilators, where they have had the benefit of a free circulation of air during the excessively hot and dry summer both by night and day. I have never seen a more robust and healthy lot of plants. Other plants which had been grown under the same conditions were removed to slightly warmer quarters to form a succession of bloom. Several plants had open flowers, which were remarkable for substance and size, and the lovely marbling of deep blue and white on the segments. This is by far the nearest approach to the conditions of its native habitat in which I have met the plants in such fine condition, and illustrates the fact that where a suitable position can be found under cool conditions the plants do much better than when grown in the warmer parts of the stove, which are generally thought to be the right treatment to meet the requirements of *V. cærulea*. Under cool treatment the tints are much deeper than when the plants are grown and flowered under warmer conditions.

H. J. C.

WINTERING SMALL ANGRÆCUMS.

ALTHOUGH the larger growing species, such as *A. eburneum* and its varieties, are able to take care of themselves during winter, considerable anxiety is always felt about the smaller members of this genus. It is very important that such subjects have a good hold upon their adopted home, whether this is a piece of Tree Fern stem, a basket, or a small pan or pot, and for this reason no disturbance of the roots ought to take place after the early summer. Again, the Sphagnum about the roots grows very vigorously during the summer months, and will often at this end of the year be almost as high as the plants themselves. This, it is hardly necessary to state, holds far too much moisture about the roots during the winter months, for one good soaking would keep the plants wet for a week or more; besides, its power of absorbing moisture from the atmosphere must be considered. The Moss, then, must be somewhat closely clipped off where it has grown too freely, but where only a moderate growth has been made, let it remain, as it forms a fairly reliable index as to the state of the compost, whether it is or is not sufficiently moist.

Regarding the amount of water needed, *Angræcums* of small growth are a good deal like *Phalenopsis*. They are easily injured by too much, but they need sufficient to keep the roots gently moving. As a rule, it is quite feasible to wait for a nice bright day to water the majority, though—in town collections more especially—some watering must perforce be done in dull and wet weather. When in doubt, however, leave

the plants for another day, or even two, rather than water too quickly. Of great help to all this section is a clear light during the winter, when for a week or more there is no sign of the sun, and for this reason the glass from now onward must be sponged inside and mopped down outside as often as possible. The baskets or pots containing the plants must be brought up as near the glass as is compatible with their safety on frosty nights. The plants themselves, too, where fogs prevail need frequent sponging to remove the sooty deposit that settles upon them in winter. H.

Dendrobium superbum.—While most of the deciduous species have finished their growth, and the earlier kinds, such as *D. aureum* and *D. crassinode*, are being removed one by one from their growing quarters, the stems of *D. superbum* are still progressing. Few of the species, indeed, require so long a season of growth, and I think that it is partly owing to their not being properly ripened that the stems of this kind are so frequently met with in a shrivelled state in spring. It is necessary now to push them on with all speed and in the lightest position possible.—T.

Odontoglossum Uco-Skinneri.—Flowers of this species come for a name from "C. C." They are characteristic of the kind, but this can hardly be styled a first-rate one. The pseudo-bulbs bear large deep green leaves, and the spikes sometimes rise to the height of nearly a yard. The blossoms are a little over 2 inches across, the sepals and petals brownish with green markings, the lip rose. Altogether the plant at first sight looks as much like a *Zygopetalum* as an *Odontoglossum*. Fortunately, it is of very simple culture, thriving well in the cool house under the same treatment as *O. grande*, but, being stronger in growth, it needs more pot room.

Oncidium incurvum.—The flowers of this pretty little plant last remarkably well, and this, fortunately, without injuring the plants to any appreciable extent, as it does in other and larger-flowered kinds. It is one of the prettiest of all *Oncidiums*, and its colours—white and rosy purple—are not at all common in the section to which it belongs. During the time the plants are in flower I usually place them in a cool, light house, which effects the consolidation of the growth and preserves the blossoms. Repotting may now take place if it is necessary, but *O. incurvum* is a plant that dislikes frequent disturbance; consequently, if top-dressing will suffice it is not wise to pull the plants about at the roots. I have large old plants here that have not been repotted for seven years, but by annual top-dressings they keep in excellent condition and flower every year. Repotting should be done thoroughly with these large plants, removing almost the whole of the old material and allowing the plants a little extra warmth afterwards to get over the check.—H. R.

Oncidium crispum.—This grand species is again flowering, and is the typical kind of a somewhat numerous set of the very showiest in the genus. It has bronzy green pseudo-bulbs and leaves, and the spikes spring from the base of the former when fully matured, rising to a height of a couple of feet and containing a large number of the fine showy blossoms. *O. crispum* is best grown either on a raft or in a very shallow basket, so that it may be suspended from the roof in the best light, this hardening the foliage and pseudo-bulbs, making them more able to withstand the check of flowering, which, when the size of plant and flower-spoke is taken into consideration, must be considerable. The healthiest and strongest plants in other ways are always those that take on the rough feel and colour that are peculiar to plants grown in ample light and air. At no time ought the roots to be much dried. When growth is active, of course much more moisture is necessary than when at rest, but shrivelling of the pseudo-bulbs, though it may take place in a state of Nature, is not permissible under cultivation. The blossoms last about a month, but if the

plants are weak it is not advisable to leave them so long, or indeed flower them at all. The Cat-tleya house suits it well.

FLOWER GARDEN.

THE SINGLE WHITE PÆONY.

In its season the white single Pæony is queen of the garden. If the *Nymphaea* assume



Single white Pæony. From a photograph sent by Mrs. Lawrenson.

royal sway, as with every petal set heavenward it lies floating on its dominion of water, so does this fair Pæony reign over hardy plants by reason of its dazzling purity and crown of golden stamens. In the sunshine its white satin petals gleam with radiance, and a flush like the dawn of rosy morn lies within the shimmering cup that holds the cluster of golden stamens, while in the shade or towards evening the petals fold to sleep like a globe of pearl. The original plant was found in an old north country garden. In constitution it is free and vigorous, the flower-stems 4 feet high and the dark green foliage very luxuriant. For indoor decoration it is exquisite when used in low bowls, as thus the blossoms remain fresh and fair for several days. Pæonies when cut with long stalks wither quickly, the stems being too woody to allow of water being freely absorbed.

A. L. L.

Prunella grandiflora Webbiana.—The end of October may seem an unsuitable time to choose for drawing notice to a flower which is not at its best in late autumn, but in summer. While this is so, the way in which blooms are produced so late in the season makes such a plant worthy of a place in the garden. I know of some who consider this a coarse plant, and it may be that it is not to be ranked as one of the highest order for the choicest border or the collection of select plants. Those who deny it the possession of any beauty may bring as an advocate for their depreciatory views the expression of Ruskin regarding the Labiate: "Full of various balm and warm strength for healing, yet all of them without splendid honour or perfect beauty." If this Self-heal has not perfect beauty, it has at least some share of that quality, which is at the root of our liking for the flowers we grow. We no longer

appreciate the *Prunella* or *Brunella* because of its healing virtues, but as a flower to help us in our gardening. Webb's large-flowered Self-heal is, however, superior to the ordinary form by reason of the greater brilliancy of its flowers. In the type they are purple, but in *P. Webbiana* they are crimson. It is not a new plant, but is not very often seen in gardens. It was figured by Maund, who gives us a little information regarding it. From his account we gather that it was cultivated in 1844. It is said to be a native of Austria, and to have been sent home by Mr. P. B. Webb, after whom it has been named.

It is, even in summer when flowers are plentiful, a useful plant in the outdoor garden, because it helps with the diversity of form, which is one of the charms of gardening. When flowers grow scarce outside, as now, one can the better appreciate its large heads of light crimson blooms. Near the front of the border or on bold rockwork is the best place for Webb's Self-heal, which is easily grown in almost any soil. One may lay stress on the need to stipulate in ordering the plant that the true variety, and not that with purple flowers, is to be supplied. I have had personal experience of the inferior *P. grandiflora* being sent.—S. A.

Ixias in open beds.—*Ixias* are, on account of their great value for cutting, grown in pots or boxes, but seldom does one meet with them planted out. All the same, they submit to that mode of culture in warm, well-drained, and sheltered gardens. Perhaps the safest way is to start the corms in small pots, placing say three in each, and then to transplant at the proper date, or when some 2 inches of growth have been made. Cool quarters should be given from the very first, and when planting is performed, the balls of soil should not be broken, nor the plants divided, but dropped into a hole made with a trowel. The compost most suitable is a rather light loam, with some leaf-mould, mulching the surface with old Mushroom manure when the warm weather comes. One or two good soakings with liquid manure are most helpful.—NORFOLK.

Callistophus sinensis.—This is without doubt one of the finest plants for the hardy flower border from August until the end of October, or until it is cut down by a severe frost. I have a large bed of it about 25 feet by 10 feet. The plants are sturdy and bushy, and yet produce strong, wiry stems 12 inches to 18 inches, or even 2 feet long, rendering the flowers useful for cutting. The beautiful mauve flowers, with a golden centre, are each 3 inches to 4 inches and more across, and last quite fresh for more than a fortnight when cut. Everyone who has seen it persists in calling it a *Marguerite*, and perhaps the Chinese *Marguerite* would not be at all a bad popular name for it. The culture is very simple. Seeds are sown in shallow boxes about the end of March or beginning of April, and when the seedlings are large enough to handle easily they are pricked out into similar boxes about 3 inches apart. They soon grow away and make strong, sturdy plants. By the end of May they are fit for transferring to the open border. A light

and rather dry sandy soil seems to suit them best. A few I have grown on rich loam do not appear to have the vigour or freedom of flowering those on light soil in a fully exposed, sunny position have. To obtain anything like a fine display it should be planted in large masses, say about a dozen plants in a group, each 12 inches to 15 inches apart. For cutting it is excellent, as it may be cut with long stems.—JOHN WEATHERS, *Isleworth*.

THE THORN APPLE.

(*Datura Stramonium*.)

In the wilderness or deer enclosure at Greenwich Park the Thorn Apple has been known to exist for fifty years at least. It is scattered over an area of about half an acre, but principally on the sloping banks of a disused gravel-pit, where amongst the decayed and decaying vegetable matter it attains to giant proportions. As an ornamental-foliaged plant the Thorn Apple deserves attention, the big Maple-like leaves, deeply cut and toothed, having a pleasing effect when seen in full sunshine. Even the pure white *Convolvulus*-like flowers, which are at their best about 8 o'clock in the evening, are by no means unattractive, as also are the prickly Apple-like fruits, which are borne in abundance. For massing in the wild garden or other portions of the woodland the Thorn Apple is well suited, but it wants shelter, else the ample foliage gets cut about badly.

Some of the specimens in Greenwich Park, notably that here reproduced, have attained to nearly 5 feet in height and from 6 feet to 8 feet in diameter.

A. D. WEBSTER.

Protecting double Violets.—Violet growers are sometimes caught napping, though I do not mean to assert that a few moderate frosts will do the Violets permanent injury. But remembering the severe October frosts which, through catching *Chrysanthemums* standing out of doors, have made growers of the latter shy at leaving them unprotected later than the first week of October, Violet growers should have their plants where, if need be, lights can be drawn over them by the second week in October. I am afraid red spider will have made its mark in gardens where the subsoil is gravelly and labour has been scarce.



The Thorn Apple growing wild in Greenwich Park.

If the leaves are the least yellow in colour, I would advise laying the plants on their sides after lifting, and syringing with sulphur water. See that the rooting medium is thoroughly moist down to the lowest roots a day or two previous to

lifting the plants, or much ball breaking and permanent injury will result.—C.

LILIUM SUTCHUENENSE.

OF the various countries which during the latter part of this century have contributed the most to our collections of Lilies, China and Japan take a first place. The number of species from these countries amounted in 1884, according to Elwes, to ten only, three of these being doubtful; now it reaches, possibly exceeds, twenty-four out of the fifty known kinds. Of these twenty-four one half are already in garden culture, *L. speciosum* and *L. tigrinum* being notable examples. To them can be added the species the subject of this note, which for some years now has been cultivated by MM. Vilmorin at Verrières. Judging by its elegance, as also the relative ease with which it can be grown, this Lily will no doubt find a place in gardens. The Société Nationale d'Horticulture de France recently awarded it a first-class certificate.

Lilium sutchuense, so named and described by Franchet (*Journal Botanique*, Sept., 1892), was discovered by the Abbé Farges in Eastern Su-Tchen, and was received in the form of seed by M. Maurice L. de Vilmorin. He, it is well known, was greatly devoted to the study of introductions of this kind, those of ligneous growth especially, and the efforts he made to acclimatise them were nearly always crowned with success. The seed of *L. sutchuense* was sown almost as soon as received. The germination was good, and the plants transferred to pots formed little bulbs which two years later (in 1897) flowered for the first time, to the number of one to three on each stem. The same bulbs, preserved and replanted in 1898 and again in 1899 in beds, became stronger and produced flowers in greater numbers. One of these identical plants bearing seven flowers was exhibited before the Société d'Horticulture, and several others bore two to five or six flowers according to their strength. A stem of *L. sutchuense* grown in the above manner is from 16 inches to 20 inches high, slender, flexible, and covered with fine white specks. The leaves are numerous, regularly spaced, and slender, diminishing in length as they approach the summit, the longest being a little more than 9 inches in length, channelled on the upper side and very finely stippled on both sides. The flowers number one to seven on a vigorous plant (single, or two to four in the wild state), in colour light orange-red, with brown stippings in the centre of the divisions, the stamens being a light orange. The plant flowers at the commencement of July and ripens its seed in cultivation.

Allied to *L. tigrinum* and *L. tenuifolium*, and having the same country of origin, it comes between these as regards its size. It is a stouter plant, and its flowers, though appearing at the same time, are more numerous and nearly double the size of those of *L. tenuifolium*, although less bright, and it differs even more from *L. tigrinum* in being a much smaller plant, much narrower in leaf, in the absence of bulbils in the leaf, and in its rather smaller flowers, which, though of the same shade of red and form, make their appearance much earlier. *L. sutchuense* has therefore the merit of elegance and distinction, in addition to which it is of easy cultivation and increase. It can, like the other two species I have named, be grown in beds of, preferably, light and fertile soil, or in deep pots, separately or in threes at most, in a mixture of loam and peat or leaf-mould, with the addition, if need be, of a little

sand (river sand preferably). I do not, however, guarantee its hardiness, as up to the present the bulbs have been wintered in sand or in the receptacles in which they first took plant form. Like other Lilies, they should be planted early in the spring—in March, for example—and at a good depth (2 inches to 2½ inches below the level of the soil), so that the roots which form at the base of the stem can live and nourish the plant. Unlike many of its race, and notably its own allied species, *L. sutchuense* produces seed freely in cultivation. Up to the present it has been raised entirely from seed, as all the bulbs have been unproductive. The seed, sown in pots in the spring in peat soil and under glass, sprouted after a few weeks, and the plants transferred to other pots formed in the first year little bulbs the size of peas. Some of these bulbs even produced one or two flowers, but only in their third year's growth attained to nearly normal size.—S. MOTTET, in *Revue Horticole*.

GUNNERA SCABRA.

If the article upon *Gunnera scabra* by Mr. Jenkins induces those who have dry gardens with no great supply of water to grow this effective and interesting plant, it will prove of much value. I have no desire, from want of room, to grow my plant of *Gunnera scabra* to the dimensions of that at Tooting spoken of by your correspondent. I have, however, now grown it for a number of years, and my experience of it on light and dry soil quite confirms what Mr. Jenkins says about it. There is no reason why anyone with such a soil should refrain from trying either *G. scabra* or *G. manicata*. I think, however, that *G. scabra* is more adapted to dry gardens than *G. manicata*. *Gunnera manicata* derives much of its value from its bold and rugged grandeur of effect. In dry soil it cannot reach its full dimensions, and, in consequence, is shorn of its greatest merit. *G. scabra*, on the other hand, is far from ineffective even when comparatively small, and it always has an attraction to garden visitors besides that it possesses to its owner. I have had a number of opportunities of observing the *Gunneras* in Great Britain and Ireland, and the best specimens I have seen were in comparatively light soil where moisture was present. Even with moisture it generally takes some time for the plant to become established. Until it has done so the results are comparatively disappointing. One thinks also that the supply of manure annually has a good deal to do with the production of the immense growth of the finest specimens of *Gunnera manicata*. It is not everyone who can give a specimen of the *Gunnera* an annual supply of three cart-loads of manure, yet this is what is supplied to some of the finest specimens in the kingdom. These are, however, of such grandeur that one can hardly say that the treatment is not justified by the results. Of course, those who look for pecuniary returns from their gardens would look upon this as a sheer waste of material which would be more usefully applied in the kitchen garden. The uses of a garden are not confined, however, to the supply of food, and those who have good reason for thinking that the aspect of gardening which appeals to the higher feelings of humanity is worthy of consideration will not consider such care misapplied. One may be permitted to add to what Mr. Jenkins has said about the requirements of the *Gunneras* the important one of shelter from strong winds. This is absolutely essential for *G. manicata* and little less needful for the allied but dwarfier *G. scabra*. Here, where we have a superabundance of wind, I find that it has its leaves injured by severe gales. This takes much from its beauty. S. ARNOTT.

Carsethorth, by Dumfries, N.B.

Nicotiana sylvestris.—"J. C. T." (p. 321) apparently misread my note on p. 194. When I

said "the foliage is the thing," it should have been clear to him what my meaning was. I was speaking of fine-foliaged plants, and in beds such as I described the foliage is undoubtedly the chief attraction. Of course, anyone seeing this fine plant, as "J. C. T." appears to have done, for the first time in full bloom naturally thinks more of the flowers and less of the foliage than those who have watched the development of the latter from the seed-leaf onwards. Again, when it is planted in clumps or long lines the individual effect of the plant is in a manner lost. I will candidly admit that when I wrote the note referred to in August I had not seen the plant in its fullest beauty, for the plants I had in flower at that time were in very poor soil. The larger plants came into bloom soon after, and instead of a score of flowers that "J. C. T." speaks of, I should say that three score is far nearer the number that good single spikes produce. If my note seemed in any way disparaging to the plant I am very sorry, for it was certainly not my intention, and I can fully bear out every word that "J. C. T." says in praise of it. I also hope that his prediction as to its future popularity will be justified.—H. R.

MR. MOON'S HYBRID POPPY.

ONE is glad to have the plate of this new Poppy in *THE GARDEN* of October 21. I have not yet had an opportunity of seeing it, but one feels much interested in it, more particularly from having the pleasure of possessing the hybrid raised by Mr. Carrington Ley. There appears to be a considerable resemblance between the two if the colouring of the plate is as good as usual. If anything, Mr. Moon's appears to be the lighter of the two in shade. I am, however, speaking from recollection, as my plant of Mr. Ley's hybrid, which bloomed twice this year, is now out of flower. The latter is not a plant to be judged from a solitary bloom or even from a small plant with one or two flowers upon it. This year my plant is of fair size, and I have seen reason to form a more favourable opinion of it than in the previous seasons during which it has flowered. It is of neater habit than many of the varieties of the Oriental Poppy, and the colour of the flowers is good also. It does not produce seed, and does not thus lend itself to reproduction by this method. This is probably an advantage, as its seeds might have produced plants resembling one or other of the parents of the hybrid—a not uncommon occurrence which often operates to the confusion of the purchaser of the progeny raised from seed of hybrid flowers.—S. A.

Referring to Mr. Burbidge's notes on this subject in *THE GARDEN* of October 21, it may be as well to state, or to re-state (for I believe the facts are already embedded somewhere in the back volumes of *THE GARDEN*), that the plant of *P. rupifragum* which produced the hybrid Poppy alluded to as originating in my garden continuously produced the same thing for several years running, nor has it in fact ever produced anything else, or reproduced itself, though there are several other plants of *P. rupifragum* in the garden which are almost a nuisance in this latter habit. This fact, whatever may be its interest, contributes, it must be admitted, nothing to the elucidation of an obscure subject, for on the "doctrine of chances" it goes some way to dispose of the "lucky fly" theory to which Mr. Burbidge alludes. I have not made a sowing of the seed very recently, and have not noticed any young seedlings round the plant this last year, but if Mr. Burbidge cares to try the experiment I will send him seed next summer, and I have little doubt that if it germinates at all it will produce the same Poppy in Dublin as it has done in Kent and in Cheshire.—J. CARRINGTON LEY, *East Farleigh, Maidstone*.

Four Poppies almost exactly like the plate in *THE GARDEN* of 21st ult. flowered here this season. They appear to come from two plants of *P. rupifragum*. Another hybrid flowered here for the first time in 1897, and was noticed

in *THE GARDEN* of that year. The flower-stems of this are about 3 feet in length, but generally trail on the ground. The flower is something like that of a gigantic *P. pilosum*, 5 inches in diameter, but the colour is poor. Another hybrid which flowered in 1898 has leaves similar to those of *P. rupifragum* and a flower like *Royal Scarlet*. This is the only one of the above hybrids which produced seed, but so far it has not germinated.—E. C. BUXTON, *Coed Derw, Bettws-y-Coed*.

—My Poppy does not bear any seed. It is not a chance seedling, as Mr. Burbidge says, but was fertilised by me and is a cross between *orientale bracteatum* and *rupifragum*. I have now raised four different batches of seedlings which grow very freely, and have had plenty of seed by cross-fertilising, but my plant of *rupifragum* has never produced any seed itself.—H. G. MOON.

Sternbergia lutea.—Can it be that Mr. Arnott's difficulty about this plant arises from not letting it be? Twelve years ago I bought a quantity of it, and put it at the foot of a south wall, and it is now a mass of beautiful colour. The first year or two it did not flower so well, but now it blooms with greater regularity than any *Crocus*, and the border is never dug. A year or two after it was planted I put some of the blue *Bindweed* on top of it, and they flower all the summer, and when nearly over the *Sternbergia* begins to push through. This year for the first time the little brown *Wood Sorrel* has sown itself among them, and now the mass of clear yellow flowers is relieved by the fine colour of this little weed.—W. R.

Anemone Pulsatilla from seed.—I have been told by good hardy plant growers, and it is so stated in some gardening works, that the seeds of this *Anemone* are of very slow germination, not usually coming up for twelve months after sowing. This season I sowed some seeds of my own saving, and to my surprise they germinated in less than a month from sowing. I am curious to know if any of your readers have had a similar experience, or is mine very unusual? As a fact I did not even sow as soon as ripe, which is of course advisable in the case of seeds that are slow of growth, but kept them until the first week in August in a cool place. I sowed in the usual way, plunging the pots to the rims, as is my usual practice in the summer season, in a cold frame. By September every seed had germinated, and the young plants have now their second leaf. When they first appeared, I thought I must have made a mistake when sowing. I could not believe that the seeds of this *Anemone* would come up in half the time taken by those of the *Crown Anemone*, sown at the same time and under identical circumstances.—J. CORNHILL.

Aster Coombefishacre.—The name of this *Starwort* is a puzzle to those who are unaware that it is that of the place of Mr. Archer-Hind, whose name at least is familiar to hardy plant growers. It is an *Aster* whose beauty leads to frequent inquiries as to what it is called. As it is one of my prime favourites, I can with every confidence speak of it in terms of highest praise. I like its elegant bushy habit, besides enjoying the crowds of pretty flowers it produces on its graceful stems. For many purposes *Starworts* of similar habit are preferable to those of tall growth with erect stems and, in some cases, stiff habit. The size of the flowers is also, as it were, a compromise between the small blooms of the type of *Aster diffusus* and those of the *Novi-Belgii* section and others of similar style. The flowers of *A. Coombefishacre* are, I see, described as flesh colour. In the nomenclature of flower colouring this is a wide expression, which does not always convey a very precise meaning. It is impossible to pourtray in words the exact shade of colour, but I should be disposed to call it a very pale lilac, though this hardly conveys my meaning. This *Aster* grows about 3 feet high, and is at present in flower with me.—CARSE-THORN.

ROSE GARDEN.

A FINE OLD ROSE.

THE single climbing cream-coloured *Rose* figured to-day grows along the eave of the roof of two or three small houses in Delgany. It was in such luxuriance this year, that I got it photographed in order to send to *THE GARDEN* as an illustration. The seed of this *Rose* was brought by one of the *La Touche* family (of Bellevue, Delgany) from India. One of the seedlings was planted some fifty years ago. This was told me by the last surviving member of the generation preceding the present owner of Bellevue. EDITH WYNNE.

Glenowen, Delgany, Wicklow.

Roses growing too freely.—Doubtless there are many readers of *THE GARDEN* whose *Roses* grow too strongly. Certain kinds will make enormous shoots that, as a rule, are but indifferently ripened owing to the rapidity of growth. The cause may be a soil too rich in

lift the plants sufficiently to sever their tap roots, return them to their former position, and tread the soil around moderately firm. Sometimes the work can be better and more expeditiously executed if two labourers are employed, they simultaneously lifting the plant upon opposite sides. I am firmly convinced that the adoption of some such measure as this, together with a dressing of lime every second or third year, will produce a healthy, mature growth that must result in a more satisfactory blossoming.—PHILOMEL.

Rose Safrano.—The remark that "Some old *Roses* require a lot of beating" is perfectly true of the above-named variety. Under good cultivation its blossoms are very beautiful, but, neglected, they are practically worthless. At Hoddesdon, Mr. Beckwith grows some thousands of this *Rose* for market, several houses each 300 feet in length being filled entirely with pot plants of it. As seen there in the early months of the year one would hardly recognise it, the colour being so rich and clear and the buds a good length. Florists much prefer this *Rose* to *Mme. Falcot*. In the autumn, outdoors, *Safrano* assumes a pretty orange-scarlet tint upon its under petals that much enhances its beauty. This



Rose over parish room at Glenowen, Delgany, Co. Wicklow. From a photograph sent by Miss E. Wynne.

animal manure and a lack of lime or chalk. The remedy may possibly be found in applying in winter a dressing of chalk at the rate of 1 lb. to 3 lbs. per square yard. The chalk should be broken up into fairly small lumps and well intermixed with the surface soil. As every rosarian knows, the best flowers are obtained from the hard wood of the current year, and to obtain such growths upon one's *Roses* should be the aim of every *Rose* grower. My desire in penning these few lines is to suggest a trial of the practice adopted by a few growers of *Roses* and by most cultivators of *Peaches* and other stone fruit trees, and that is periodical lifting of the plants in order to check their strong growth. *Peaches*, *Plums*, *Cherries*, &c., can be brought into a less coarse and more fruitful condition by triennial lifting, and why should not certain *Roses* that are notorious for their paucity of bloom be so treated? Some may say that this can be remedied by pruning or pegging down. This, doubtless, is the case with plants that possess plenty of good hard wood, but not so those kinds that are full of gross, unripened growths. Therefore I would advise all who have such plants to try lifting some this autumn. Do not dig the plants out of the ground; merely take a deep spade, force it into the ground as far as it will go, then

tinting M. Vilmorin, in his excellent paper upon "Flowers of the Riviera" in *Journal of the Royal Horticultural Society*, attributes to the effect of cold upon the flowers when in the bud. Dean Hole more than ten years ago said that out of every hundred bushes grown on the Riviera ninety belong to the *Safrano* tribe. It is possible fashion may have changed this since then, for Papa Gontier and some few others must be very extensively grown there. M. Vilmorin says that the great merit of *Safrano* lies in the fact of its developing buds at a temperature too low for other *Tea Roses*. This I have proved upon pot plants in cold houses. An excellent plan to obtain a quantity of its valuable buds late in the year is to keep a number of plants growing outdoors during the summer, and as buds appear to pinch them off. Continue this until September or October, then the subsequent growths are allowed to bloom, and will do so for some time in a house where a little heat is turned on at night and on dull days to ward off damp. The origin of *Safrano* is not positively known, but some think it is a descendant of the yellow *Tea Jaune*. It has doubtless given many seedlings, for *Mme. Falcot* and *Mme. Charles* always appear to me to be descendants of *Safrano*. As a standard or moderate climber *Safrano* is very useful.—P.

BOOKS.

CALENDAR OF FLOWERING TREES
AND SHRUBS.*

We are pleased to see one of our young amateurs taking an interest in the neglected subject of trees and shrubs, and this very pretty book comes to hand just at the right time—in the planting season. It is a well printed, attractive book, with very good coloured drawings by Miss Gertrude Hamilton, and very nicely reproduced. The plan of the book is a distinct one—that is to say, first we have a list of the trees and shrubs that flower in the different months, then follow the descriptions of the plants themselves, and, lastly, selections for different purposes and localities, whether town, seaside, sheltered, sunny, nature of the soil they require and so on. The main and the most interesting part is the descriptive, and in this with no pretence to botanical technicalities, which indeed would be out of place, there is a good deal of useful information from the garden point of view. We mean useful as far as it goes, as it really does not go far enough. The things dealt with are properly dealt with, but not comprehensively so. For instance, there is only one *Jasmine*—the *Winter Jasmine*—and one *Daphne*, no mention being made of any other, and while all the handsome and important *Honeysuckles* are left out, two of much less value are given; the *Japan* the *Dutch*, and our native *Honeysuckles*, which are as good as any, being taken no notice of. No doubt these omissions will be put right in another edition should there be one.

The coloured illustrations are very good; the form of the book, however, is too open and loose. The modern publisher, in getting away from the nice old 8vo size, very often makes an awkward book through not considering the proportion of the type to the page in the way the old printers used to do. As an example of the descriptive part of the book, we quote the following:—

Cæsalpinia japonica is a beautiful deciduous shrub that does not grow more than 4 feet high, but will spread vigorously and have a very uncommon appearance. It produces its bright canary-yellow flowers in June in racemes, which will remain fresh in water many days after they have been cut. Its stems and branches are armed with a number of red, curved prickles, which show up well against the light green bark. A mixture of loam and leaf-mould suits this best. The plant is not easily increased, but the best way is to take cuttings straight from the growing shrub and plant them in heat, in sand, with a hand-glass over them.

BOUILLIE BORDELAISE.

This is made by dissolving in a vessel in a small quantity of water 3 lbs. of sulphate of copper, and in another vessel in a like quantity of water 2 lbs. of unslaked lime. When the solutions are complete, pour the lime slowly into the sulphate, stir the mixture well, and then add enough water to bring the whole up to 25 gallons. Spray the mixture all over the parts requiring protection, using a syringe. The precipitate is insoluble, but is held in suspension by the movement of the liquid. Once deposited on the leaves the water evaporates, but the precipitate adheres. Use only wooden vessels. The figures given above are not intended to be exact, but the proportion is so. For example, the quantities can be diminished in order to have a bouillie less concentrated; thus, 1½ lbs. copper sulphate and 1 lb. lime. The efficacy of the protection is not neces-

sarily in direct ratio to the concentration of the bouillie, but it is important that every part of the plant should be well drenched with the liquid. Bouillie Bordelaise is very effective in most cases of disease caused by fungi. Two or three dressings may be relied upon to preserve Vines from mildew and Pear trees from spot (though much less easily), but they leave very visible traces of their use, which in fruit of choice varieties is a drawback, and another inconvenience attending its use is that it leaves a coating of precipitate on the utensils.

PEAT-MOSS LITTER.

I HAVE not had experience with this myself as a manure, but some of my acquaintances have and speak favourably of it. Nothing could be more opposed to each other than the experience of Mr. Whitworth Shaw and "H." as related on p. 325 of THE GARDEN. Like Mr. Shaw, I take exception to "H.'s" statement that "In bog peat nothing grows naturally to any perfection." I do not know what your correspondent means by growing naturally. I can assure him that bog peat is capable of growing first-class vegetables, as we have ample evidence in this district (Preston), where thousands of acres are under cultivation. It produces the best of Potato crops, and Celery such as is seldom seen elsewhere, one grower to my knowledge taking two crops of it annually from the same piece of land, the first crop being hastened on in frames, and as it is dug and sent to market another batch is planted, and makes saleable stuff about Christmas. Cabbages have been grown to an enormous size. I have seen Carrots come from the moss-land, as it is termed here, as big as I have seen anywhere, and the same may be said of Cauliflowers and Mangold Wurtzel. Onions are also well grown, so are Cucumbers and Vegetable Marrows. Some of the tenants by excavating holes come across marl, which is added to the peat, and on such land it is nothing uncommon to see Oats over 5 feet high. Some of the Celery growers use a good deal of sewage, but the majority of them depend on manure, which is applied in very small quantities compared with what is usually used in gardens. The traveller from Liverpool to Preston by the Lancashire and Yorkshire Railway will travel some miles through bog land, but covered mostly with some kind of vegetation. A few miles from Preston, on the east side of the line, he will see stacks of peat turves drying for fuel after being treated with tar and rose oil. It is also used by wheelwrights, blacksmiths, and carriage builders for heating wheel hoops. In some instances the peat is cut a depth of 8 feet as turves before it is laid out for crops, and the area is becoming annually less. Some of the land thus reclaimed brings from £4 to £8 per acre, the price depending more on the locality perhaps than the quality of the soil. I consider bog peat a most valuable substance; added to clay it lightens and warms it; added to sand it cools and consolidates it.—COR.

—I observe that Mr. J. Whitworth Shaw on page 325 recommends peat-moss litter as manure. His remarks contrast strangely with the short note on the same page from "H.," who asserts that "it is one of the worst nuisances that a gardener can have to contend with." Mr. Shaw says that the value of the peat-moss for the ground before it has been used as manure is as great as that of straw, but I doubt it. Admitting that neither is of great manurial value, it is well known that the ploughing in of straw stubble is beneficial to land, but would a farmer accept peat-moss for the same purpose if it were offered to him? I readily admit that moss litter is a capital sponge, and therein very often lies the evil. By the use of moss litter on retentive land in a wet season, the obvious result, so far as my experience goes, is that the moss litter may give off the urine, and then it collects moisture and holds wet in the ground which would otherwise drain through, and this I have proved by digging out lumps that have resembled a water-laden sponge. Straw litter supplies

humus, it decays quickly and becomes part and parcel of the soil itself; whereas, as Mr. Shaw admits, the peat-moss remains as an absorbent, making the land wetter and colder in a damp season. On the other hand, if the summer is hot and dry, when the moisture in the moss litter has been spent, dry material remains, possessing no manurial value in itself.—H. H.

THE PRESERVATION OF REMARKABLE
TREES IN FORESTS.

THE authorities over forests and rivers in France have sent the following circular to all the agents in France and Algeria:—

"In many forests on private estates and in communes there are often trees famed throughout the country for some historical episode or legend which is attached to them, or they are known for their great beauty or for their exceptional size. These trees form part of the æsthetic riches of France. They add to the beauty of its landscapes and attract visitors to places which, without them, would be out of the usual routes of tourists. They make our forests loved and appreciated. The surrounding population has a sincere attachment to these witnesses of a distant past, and never sees them disappear without regret. It is then of the greatest importance that their protection should be the constant aim of all employed by the authorities of forests and rivers. Under no pretext whatsoever ought they to be felled so long as they give any sign of life. To secure their preservation the chief of this department must give a detailed account of the trees, giving the name of each of them, the exact position, the size and the reasons for their preservation. Should it become absolutely necessary to fell one of these trees, this, in the future, cannot take place without the special authority and permission of the Conservator of Forests and Rivers. The conservators are requested to visit in the course of their annual inspections the trees which ought to be preserved, and thus personally assure themselves that they have been looked after."

This is a good move on the part of the Director of Forests and Rivers. Let us hope that its agents will take the greatest care that the directions are diligently carried out.

Sad Aziola.—Apropos of the interesting review of "More Pot Pourri from a Surrey Garden" which appeared in THE GARDEN of the 21st inst., the verse of Shelley's early poem (1821) is quoted ("To Aziola"), and the reviewer asks to what owl the lines refer. The reference is to the tawny owl, or *Strix stridula* (Linn.) The late Lord Lilford, for many years president of the British Ornithologists' Union, described the almost unceasing cry of the hawk owl (*Surnia ulula*, Linn.) as "very melancholy," but I question if Shelley was acquainted with the "music" of this bird. Other poets besides Shelley have made references to the "sad," "melancholy," and "mournful" note of the tawny owl, happily still plentiful in our woodlands. Gray ("Elegy written in a Churchyard") has these lines:—

Save from yonder Ivy-mantled tower,
The moping owl does to the moon complain.

Burns ("A Vision")—

As I stood by yon roofless tower,
Where the Wa'flower scents the dewy air,
Where the howlet mourns in her Ivy bower,
And tells the midnight moon her care.

Many other poetical passages of a similar nature could be quoted, all referring to "Sad Aziola," *alias* the tawny owl.—G. W. MURDOCH, Naturalist Editor, *Yorkshire Weekly Post*.

The weather in West Herts.—A St. Luke summer. Each day during the past week has been unseasonably warm, while the nights, on the other hand, have been about as unseasonably cold; consequently the daily range of temperature has been on most days unusually great. On three nights the exposed thermometer showed about 5° of frost. At the present time the

* "Calendar of Flowering Trees and Shrubs." By Henry Hoare. Richard Flint and Co., 48 and 49, Fleet St., E.C.

soil both at 1 foot and 2 feet deep is of about a seasonable warmth. The air has been unusually dry lately in the warmest part of the day, but there has been more or less fog on most mornings and evenings. No rain has now fallen for nearly a fortnight, and during the past ten days no measurable quantity of rain-water has come through either percolation gauge. On the 22nd the atmosphere was remarkably calm, the total velocity at 30 feet above the ground for the 24 hours being only nine miles, making this the calmest day yet recorded here in October. Throughout the week ending the 22nd the wind came exclusively from the same point of the compass—E.S.E. The sun has shone on an average during the week for nearly $4\frac{1}{2}$ hours a day.—E. M., *Berkhamsted*, October 27.

—A week of very variable temperature. For instance, on the night preceding the 27th ult. the exposed thermometer never fell lower than 53° ; whereas a few nights afterwards the same thermometer registered 3° of frost. At 1 foot deep the ground is now about 1° warmer, and at 2 feet deep about 2° warmer than is seasonable. Rain fell on three days, to the aggregate depth of $1\frac{1}{2}$ inches—equivalent to 7 gallons of water on each square yard of surface. The past month, taken as a whole, was, if anything, rather a warm one. The fact is the days were nearly all warm, but, on the other hand, during the first three weeks there was only one night which was not more or less cold. Consequently the average difference between the highest and lowest temperatures was unusually great—in fact, greater than in any other October of which I have here any record. Rain fell on only ten days, but to the total depth of rather more than 3 inches, or about the average quantity for the month. Nearly the whole of the total fall was deposited on four days—the 1st, 26th, 27th, and 29th. The sun shone on an average for $4\frac{1}{2}$ hours a day—making it the most sunny October since that of 1893. With the exception of 1897, this was also the calmest October of the series (fourteen years).—E. M., *Berkhamsted*.

NOTES OF THE WEEK.

Cereus triangularis.—A large plant of this Mexican species trained to the roof of the large succulent house at Kew has been flowering freely of late, at least so far as freedom may be applied to such plants. The distinctly triangular growth is more or less of a climbing nature and in this way covers a very considerable space. The blossoms are yellowish and usually appear during the autumn months.

Late-sown Eschscholtzias.—After all the bad weather we have been having lately—weather which has cut down Dahlias and even injured Chrysanthemums—some clumps of Eschscholtzias sown broadcast on June 7 are quite fresh and showy. The value of sowing a successional batch of such hardy annuals is clear when, at the end of October, bunches of half-open buds can be cut. The buds open well in water.—T. J. W., *Woodside Park, N.*

Tacsonia Van Volxemi fruiting.—Mr. Renshaw asks whether the fruit of *Tacsonia Van Volxemi* is eatable. A few years ago when I had a plant of it in my greenhouse I used to eat the fruit. Anyone who likes the peculiar flavour of the fruits of *Passiflora edulis* and of the *Granadilla* (*P. quadrangularis*) will like them. They are not so acid as the fruits of *P. edulis*, but are a good deal like them otherwise.—C. W. STRICKLAND, *Hildenley, Malton*.

Abutilon Golden Fleece.—This richly-coloured kind is one of the most free-flowering of this useful group of greenhouse shrubs, and once it begins to bloom it continues in unbroken profusion till nearly the end of the year. During the several months that the plant remains in flower many hundreds of blossoms must be produced, particularly where, as is the case in the No. 4 range at Kew, a well-established plant occupies a good position against the roof glass. Here health, vigour, and freedom of flowering go hand in hand.

Horminum pyrenaicum album.—The typical *Horminum pyrenaicum* is not a plant which commends itself to me. There are, however, some who consider it a plant of considerable value and

worth growing in the border or in the rock garden. They may, perhaps, like to know that there is a white variety in cultivation. It does not appear to be much grown, as I have no recollection of having seen it in bloom until September last, when I came across it in a nursery in Scotland. It is, I think, equal in point of merit to the type.—S. ARNOTT.

Quercus coccinea.—In the early days of autumn there is perhaps no more beautiful a tree than a well coloured example of the Scarlet Oak. The fine colour is always greatly enhanced by the bold, handsome leaves, and in the case of some of the best examples we have seen the colour is not easy to describe. Even in the smaller specimens that of late have found their way into not a few gardens the effect is very fine, if not indeed quite unique. Of its beauty and worth a few well coloured sprays recently noted at the Drill Hall acted as a useful reminder.

Begonia Credneri.—Among the more vigorous and robust growing kinds of Begonias, this when in flower is always effective. It is somewhat closely allied to *B. Haageana*; indeed the two may be but forms of the same species. In the huge mass of blossoms, however, the two have much in common, not merely in the dense cluster and the drooping character of the same, but equally in the creamy colour of the flowers which are slightly tinted here and there with rosy lilac and more or less heavily bearded externally. The foliage is abundant in both kinds.

A warning note—Ampelopsis Hoggi.—I wish to put people who grow this wall shrub on their guard against its virulently poisonous properties. The plant usually grown under the above name is a species of *Rhus*, nearly, if not quite, identical with *Rhus Toxicodendron*, or Poison Ivy. A friend was here some time ago and asked for cuttings, which were sent. In cutting them off and packing no one suffered, but my friend's son, who received them, was laid up for several days with a painful burning rash or eczema. Like *Primula obconica* and other plants capable of setting up a painful rash, &c., in some individuals, this *Rhus* or *Sumach* only affects certain people, but it behoves all to beware of the scandent or climbing species, especially in handling them for pruning or propagating.—F. W. B.

Alyssum maritimum.—A reference to this pretty sweet-scented annual on page 348 reminds me of a beautiful little plant which is said to be a variety of *Alyssum maritimum*, and which I have met with in only some two gardens. I think the name was given as *A. m. compactum*. I first saw it at Carton some three years ago, and Mr. Black thought highly of it there. This autumn I again met with it, but this time it was at Tynningham, where it is equally valued by Mr. Brotherton, the gardener there. As an edging plant this form is quite an acquisition, its compact habit and neatness adapting it admirably for such a purpose. It is quite possible that it may be a different species from *A. maritimum*; it is, at any rate, more distinct from it than one would expect in the case of ordinary variations.—S. ARNOTT.

Anemone blanda scythica.—To avoid a mistake becoming permanent I beg to state that the figure lately published is that of *Anemone blanda scythica*, and not of *cyprina*. This latter occurs with blue, white and reddish flowers on the island of Cyprus. Moreover, it is the worst form. Just opposite Cyprus, on the mainland and stretching into Asia Minor, a better and deeper coloured form is found, best represented by Mr. Ingram's variety. *A. b. scythica* flowers a fortnight later than these and has the most refined flowers as well in shape as in colour; the white is purest, and the ultramarine has a peculiar tone difficult to describe. I have not been able to find out where Kotschy had gathered the specimens which he brought to Vienna some forty years ago, the flowers of which were white, with a blue rim.—MAX LEICHTLIN.

Primula obconica fimbriata.—There is little doubt, I think, that this improved form will largely take the place of the original kind for pots and for general decoration. Having a somewhat bolder spike and larger individual

blossoms, there is no doubt about its superiority. That this species should so long have resisted all attempts at hybridising is remarkable, and which is but intensified when it is remembered that in colour and somewhat in form the plant varies when raised from seed. Even in the habit there are slight differences, some of the plants being decidedly more compact than others. In some flowers I have seen there is an indication of the star-shaped centre that alone attracts attention. What is of great importance in this kind is its comparative hardness, its free-seeding capabilities, and not least its perpetual flowering. Once a break is effected, the present barrier will be broken and some strange kinds may result.—E. J.

Rose Souvenir de la Malmaison.—A characteristic of this much-admired Rose is that it dislikes the great heat of summer, and good flowers under strong sun-heat are rare. When, however, cool nights replace the intensely hot and stuffy ones and refreshing dews put in an appearance, the flowers of this Rose improve. More recently formed buds grow apace, and sometimes handsome trusses adorn quite old plants of this kind. This has not been so general an experience this season, by reason of the absence of moisture either from the rainfall or from dews, though a few good blooms have appeared here and there. Only a few days since, notwithstanding the touch of frost on more than one occasion, some good blooms and quite a batch of prominent buds were noted in a large garden. This kind was, however, quite alone in this respect.

Saxifraga Cymbalaria.—In addition to *Alyssum maritimum*, which you mention as a late carpet plant on page 348, one may perhaps be allowed to suggest the yellow-flowered *Saxifraga Cymbalaria* for the same purpose. In my garden I have now in bloom what one may call the second crop of this bright little Rockfoil. The plants now in flower are the progeny of the seeds produced by plants which bloomed earlier in the year and which have not been long cleared away after their work was done. The plants now in bloom are less than an inch high. Those who do not know this little Saxifrage will do well to make its acquaintance by procuring a packet of seed in spring and sowing it where it is intended to bloom. Before long they will be rewarded by its little glossy Ivy-shaped leaves and its bright little yellow flowers. It sows itself so freely that one introduction is usually quite enough to ensure its establishment in a garden. It flowers quite well in the sun, but prefers, I think, at least partial shade with a fair amount of moisture.—S. ARNOTT, *Carsehorn, by Dumfries, N.B.*

Dracæna Sanderiana viridis.—Quite recently a plant bearing this name was noted at the Drill Hall, the plant being also presented to the floral committee for its consideration. The plant in question obviously claims parentage with the well-marked *D. Sanderiana* with variegated leaves, possessing the same prolific root-stock and the same identical habit. Indeed, the leaf coloration is the one point of difference. It is a difference, however, that should mete out a very considerable value to the plant, which to all appearance is capable of enduring much hardship. Only a single pot plant was shown, and from this some half dozen equal sized growths arose. So far as the exhibit alone is concerned, the subject is not an impressive one, but knowledge of the more familiar kind suggests a considerable value for the above plant. No tidings, we believe, were forthcoming as to whether the green form has been so imported, or whether it is but the variegated reverting to the more probable normal condition of the plant. Be this as it may, there was no indication of the slightest variegation in the plant referred to.

Linum flavum.—While we have almost a surfeit of yellow flowers in some of the autumn months, it cannot be truly said that we have too many of that colour when November comes in. At this time, indeed, flowers of any colour in the open garden are too few for us to be able to say

that any hue is too prevalent. One thus appreciates highly the golden yellow flowers of *Linum flavum* which have been spared to us, even though the want of sun or the weakness of its rays does not cause them to open as in the brighter months. Even the closed blooms look attractive high up on the rockery. One hears at times of this yellow Flax not being hardy. There are some gardens in which it does not stand the winter well, but if it has a sheltered position rather above the ground-level in a dry and light soil there is not much fear of it in ordinary winters. Some of the plants in this garden are several years of age. They come away from the base in spring if the frost has cut them down so far. It seeds freely here, and generally some of the seedlings produced have to be thrown away. Good-sized plants of *Linum flavum* are very pleasing in summer, and though less bright now, are yet appreciated.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Pyrethrum uliginosum.—While the Moon Daisy has the fault of being rather too tall for the time at which it flowers with us, it is a plant which can hardly be dispensed with by those who want outdoor flowers as late in the season as possible. Some plants of tall growth may be reduced in height without sacrificing the flowers by cutting them down when they have made a portion of their growth. *Pyrethrum uliginosum* does not, however, lend itself to this treatment as some other plants. This is due to its late-blooming habit, as cutting back delays it still further. Apart from other considerations, the height of the plant is a disadvantage, because of elevating the flowers to a position in which they are more exposed to the cold winds of the season, and thus more likely to be destroyed. A day or two ago I saw several long lines of this plant in gardens in one of our south of Scotland towns. The day was inclement and the appearance of the Moon Daisy was far from attractive under those conditions. Yet it could not be said that they were not worth growing, as it only needed a bright day or two to make many of the blooms quite fit for use as cut flowers. It is, of course, not everyone who cares for the blooms of *Pyrethrum uliginosum*, with their white rays and their greenish-yellow discs. They are, notwithstanding, flowers not to be despised.—S. A.

Victoria regia flowering in the open.—In answer to your correspondent "F. W. B." as to the flowering of the *Victoria regia* in the open air, I will look up my print of the plant in flower, published in the *Field* about twenty-five years ago. Meanwhile I may just say that the plant was flowered in an open tank at Behington, Cheshire, in the garden of Mr. Joseph Mayer, F.S.A., a relative of mine. I superintended the culture, and there was no glass or covering from the time when the small 4-inch plant was planted from the greenhouse. It flowered splendidly and the heat was never more than 75°, and not often so much. The year before I had grown the *Victoria regia* in my garden in the Lake district, where we have little sun and much rain. It budded, but owing to an accident, it was too late to flower before the September cold set in and checked it. I had no cover, and wind, not cold, was the worst enemy. The largest leaf was 5 feet 4 inches across, and ought to have been much larger. Coal and coke for the season with a large tank cost about four guineas. I had all the tropical Lilies with *Euryale ferox*, *Nelumbiums*, &c. I saw Messrs. Weeks' place in Chelsea. It was a tank in a courtyard, and I was told a cover was put on every night. I do not know whether it flowered, but there is no difficulty with fair conditions. Last year *N. stellata* flowered freely in my open pond in summer, no heat; put in in May, died in winter.—H. B.

Clerodendron trichotomum.—The notes on "Flowering Shrubs in South Devon" by your correspondent "S. W. F." are always of interest, and often afford one much valuable information in a pleasant way. One is at times a little envious of those who dwell in such a favoured region and who are thus able to grow plants denied to us in the north. Still, though we have to regret our inability to grow some things, we can none the

less enjoy the way in which your contributor talks of these shrubs in the sunny south. Among those spoken of on p. 342 is *Clerodendron trichotomum*, a fine shrub which is, so far as one knows, of no use as a flowering shrub in Scotland. There may be one or two places on the west coast where it will bloom; if so, I have not heard of them, but the climate is such that one or two favoured spots might be warm enough to bring it into flower in a warm season. I know several Scottish gardens in which it has been and still is grown, but in none of these has it ever bloomed. These gardens are in districts widely scattered, and it is a little disappointing to those who have this *Clerodendron* to have year after year the same unvarying record of "no flower." Even near Dublin, in the sister isle, one was disappointed to hear of non-success in places where one would have expected better results. I do not know any northern gardens in which the other species named by "S. W. F." (*C. Bungei*) has been tried. It may, perhaps, be happier in the north than its congener, but I doubt it.—S. ARNOTT.

Aster John Wood.—By a strange coincidence I was engaged in writing a note upon this *Aster* for your columns when the issue of *THE GARDEN* containing the news of the death of Mr. John Wood arrived. Although I never had the opportunity of meeting Mr. Wood in person, we had some correspondence, and, in common with many others, I have profited largely by his writings on hardy flowers. I may, therefore, be permitted to join in the expression of regret made by the correspondent who conveyed the news of the decease of Mr. Wood to us. An observer so keen and so well informed will be sadly missed in the ranks of admirers of hardy flowers. Many who grow the *Starwort* identified with his name will look upon it with fresh interest as a flower pretty in itself which will ever be associated with the memory of one known to us, if not in the flesh, by writings which have given true pleasure. Even had *Aster John Wood* not this association it would deserve a place in the garden on account of its own merits. It would be rash, in view of the progress in the *Asters*, to say that it will remain the best of the white *Starworts*. It will, however, be long grown as a flower of great beauty and usefulness in the garden and for cutting. Those who do not know it may be glad to have it brought under their notice and to have a brief description. It belongs to the *Novi-Belgii* section of the *Starworts* and grows about 4 feet high. The flowers are large and handsome, rather cupped in shape, and when at their best pure white, with a yellow disc. They pass off, like other whites, slightly pink. It is a valuable plant no one who likes the *Starworts* will regret growing.—S. ARNOTT.

Callistephus hortensis.—The note published in last week's *GARDEN*, p. 348, is both incorrect and misleading. Commenting on the plant introduced from China by Messrs. Vilmorin and Co., Paris, and described in their catalogue for this year as the "single large-flowered China *Aster*, new," and of which a coloured plate was published in *THE GARDEN* last year, the writer of the note states that "large business houses of repute will doubtless take some trouble to make it clear to their patrons" that this single *Aster* is the same as the weedy single-flowered reversions called "rogues," which too frequently come among the double-flowered forms. It is also stated that there are several colours of single forms to be had from seeds purchasable for a few pence, and that a good show of them has been made at Kew this year. Where are these seeds to be had? I have never seen among the "rogues" in *Aster* beds anything approaching even in form, stature, or colour the types as represented in *THE GARDEN* plate. I am certain that none of these coloured forms were to be seen in the border at Kew, the only single *Asters* grown there this year being Vilmorin's introduction, viz., typical *C. hortensis*. The note contains one statement only which is in accordance with facts, namely, that this single *Aster* made a "good show at Kew, the free-flowering of the plants being quite noteworthy."

It is too absurd to suggest that Messrs. Vilmorin, the greatest breeders of and dealers in *Asters*, as well as being a firm of "repute," would send out as new a plant which was simply a rogue, and that the *Botanical Magazine* as well as all the horticultural journals should publish pictures and special notices of it as being a worthy addition to garden flowers.—W. W.

PUBLIC GARDENS.

CHRYSANTHEMUMS AT VICTORIA PARK.

THE collection of *Chrysanthemums* at Victoria Park embraces all types of the flower, and consequently exercises a useful influence upon the minds of the many thousands of visitors which throng the large glass structure during the flowering season. Growers in more favoured localities have not the faintest idea of the difficulties which they at Victoria Park have to contend with. Impure atmospheric conditions, which must of necessity be associated with factories of all descriptions, and from whose chimneys soot and smoke are continuously emitted, cannot be conducive to the good health of plant life, and in the present instance of *Chrysanthemums* in particular. Incurred varieties have always been a special feature of the collection here, and probably the most pleasing sorts of those almost fully developed were Mrs. George Rundle, George Glenny, and Mrs. Dixon, all members of the same family. These plants were freely flowered. Other representative incurred sorts were Chas. H. Curtis, the large yellow, rather late in this instance; M. R. Bahuant, a large globular flower, carmine-rose, with deep bronzy reverse, and early; Lord Rosebery, a pretty silvery mauve, lined white, of good form; Baron Hirsch, on late buds deep chestnut-bronze; and numerous plants of D. B. Crane. This is a very neat rich bronzy buff bloom of good form and true incurred petal. The plant also is very dwarf. Those mentioned will suffice to show that both new and old varieties are appreciated. The Japanese sorts, of course, were largely in evidence, and the most interesting feature of this display was the varied character of the blooms representing this section. Flowers of bygone days, such as Margot, salmon-pink; Fair Maid of Guernsey, a popular white many years since; Stanstead Surprise, reddish purple, tall; William Holmes, brilliant crimson; Snodflower, rich yellow; Mlle. Lacroix, white; Gloire du Rocher, rich glowing crimson of neat form; President Borel, carmine-rose; Pallanza, rich yellow, and others were representative of the older varieties.

Those of more recent days were Mrs. E. G. Hill, having large blooms of pale flesh colour; Mrs. C. Blick, a very large pure white; Werther, a distinct claret-red; President Bevan, rose, shaded yellow, incurred Japanese; Mlle. Paul Lacroix, a beautiful soft yellow; William Seward, deepest crimson, very free and effective; Royal Standard, a deep blood-red colour, long florets, making a large spreading flower; Le Grand Dragon, deep yellow, tinted bronze; Mme. Couvat du Terrail, very large, creamy white; N.C.S. Jubilee, a pleasing silvery rose, incurred Japanese; Hairy Wonder, distinctly the best of the type; General Paquie, a rather flimsy bronze flower; Marie Calvat, and a grand batch of the pure white incurred Japanese Lady Byron. The blossoms of these plants were of a high order of merit. Another feature is that of growing a nice lot of decorative sorts, and under this heading were to be found pretty plants of Rye-croft Glory, the October-flowering bronzy yellow. Others in splendid form were Lady Selborne, white, and James Salter, mauve-pink, still to be numbered among the freest and the best; the popular old gold flower, Source d'Or, and Margot, also grown freely. These were dotted about between the large-flowered plants and added considerably to the display. Singles were represented by such varieties as Mary Anderson, cream-white, still one of the best; Anemones, by the rich reddish crimson Descartes, which always looks very hand-

some for a week or two, besides other types of the flower in endless variety. The plants are arranged in two large undulating groups in a long glass structure with a raised pathway between them. This has the effect of hiding the pots and bringing the flowers well within the line of sight, thereby adding very materially to the pleasure of the visitors. To keep the display going for some time, a temporary structure outside shelters numerous plants for succession, and as the period of flowering is quite a fortnight later than usual, it will be quite another month before the display will be over.

SOUTHWARK PARK.

THE display of Chrysanthemums in Southwark Park is generally interesting, considering the adverse circumstances under which they are grown, the neighbourhood being a densely populated one and the smoky districts of Rotherhithe and Bermondsey so closely adjacent. In spite of these difficulties, Mr. Curle, the superintendent, always makes a good display, and one that is much appreciated by the residents and visitors. It will be at least a fortnight before the collection is at its best, but the plants are all coming on well and there are many fine buds of the most popular sorts rapidly opening, among which are Silver King, Duke of Wellington, Olive Ocle, Australie, Mme. C. Audiguier, International, W. H. Lincoln, Eda Prass, Lady Byron, C. Orchard and others of equal merit in the Japanese section. At the time of our visit the large-flowering Anemones were not largely represented, the best being Descartes, a fine wine-coloured variety, very useful and judiciously employed in groups, such as the one now under notice. M. C. Lebocqz was also coming on in very good form. We missed, too, the interesting collection of hairy varieties which formed a peculiarly striking feature a few years ago, but which no doubt will be seen by later visitors. Incurved can only be seen at their best as the season advances, but R. Cannell, a fine large-sized flower of golden yellow-bronze; Baron Hirsch, very close, compact, deeply built, of a good colour; Duchess of Fife, pure white and very regular in build; Globe d'Or and D. B. Crane, of varying shades of yellow, are all well out and lead the way. M. R. Bahuant, very fine and globular, colour deep rosy carmine or maroon, is another of the early ones in this section.

Among Japanese that are conspicuous for their colour are Hamlet, a very old, but very beautiful flower of the Japanese section, and the colour a deep shade of soft rosy salmon, and H. Shoemsmith, yellow, with long drooping florets. Sunflower, an old favourite, deep golden yellow, and Mrs. J. Shrimpton, deep orange-yellow, shaded crimson, are equally attractive. Oceana, the fine yellow colonial incurving Japanese, deserves special attention, as do also Lizzie Seward, bright rosy magenta, and Gambetta, a deep fiery terra-cotta, shaded crimson. Very useful and effective for its warmth of colour is Gloire de Mézin, a fine globular Japanese of a deep golden orange, shaded bronze. Then there is the old-time favourite, Elaine, whose snowy white always seems pure and chaste and generally commands admiration. Emily Silsbury is larger, but of the same colour, while Mlle. Marie Hoste is less beautiful, the colour not being so pure, but its size seems to commend it. There were also some very bright blooms of the pure pale yellow King of the Hirsutes, which, as its name implies, belongs to the hairy section, and amongst other old-established favourites at Southwark we again noticed some good samples of J. H. Runciman, rich golden yellow, shown in several examples. Mme. Ed. Rey, pale pink, but very large and tall, is useful for its earliness. L'Ami Etienne is another. A very pretty bright rosy pink is found in William Tricker, and for depth of colour in purples, Stanstead Surprise is at once useful and effective.

The plants are arranged in a T-shaped house in form of a central bed, with a bank running

round the sides, thus giving a path that enables the visitors to go right round the house without fear of confusion.

Closing of Coldfall Wood.—Great regret is felt at Muswell Hill and East Finchley at the decision of the Ecclesiastical Commissioners to close the Coldfall Wood, which is situated to the north of Fortis Green, and is a remnant of the old Middlesex forest. A road is now being made through the wood, and it is apparent that it is to be "developed." Though the wood was never open to the general public, a large number of residents were privileged to use it, and on their behalf Mr. Phillips, a local resident, recently forwarded a petition to the Ecclesiastical Commissioners asking them to reconsider their decision.

SOCIETIES AND EXHIBITIONS.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE floral committee of this society held a meeting at the Royal Aquarium, Westminster, on Wednesday, October 25. There were some very fine exhibits, among which may be mentioned Ada, a large Japanese of a golden bronze shade; Miss Lily Boutroy, also of good size; Mrs. Burgess, a pretty shade of salmon-purple with golden reverse; Mme. Gabriel Debie, a very large white Japanese; and Miss Elsie Fulton, also a large white Japanese. Several of these the committee desired to see again. Awards were not numerous, the standard now-a-days being a high one, even considering the great number of fine novelties that are appearing every year.

First-class certificates were awarded as under:—

CHRYSANTHEMUM MRS. A. H. HALL.—This is a very fine, massive built flower, large and globular, with grooved florets of medium width; colour deep orange-yellow, shaded golden bronze. Exhibited by Mr. R. Kenyon.

CHRYSANTHEMUM FLORENCE MOLYNEUX.—This is also very large, and is a close, compactly built flower of great substance. The florets are twisted, of good width and grooved. The flower belongs to the Japanese incurved section. The colour is white. From Mr. N. Molyneux.

CHRYSANTHEMUM EDITH PILKINGTON.—A Japanese with long drooping, medium-sized florets, which are twisted and curly. The colour is a pale shade of canary-yellow, deepening towards the centre. Staged by the same exhibitor as the preceding.

CHRYSANTHEMUM MISS GODSMARK.—An incurved of close and regular form, with a good breadth of floret, rather large in size, and the colour bright reddish chestnut-bronze. This came from Mr. R. Owen.

CHRYSANTHEMUM MISS ALICE BYRON.—A noble Japanese flower of great dimensions, very globular and deep in build, the broad florets closely and compactly arranged. Colour pure paper-white. From Mr. H. Weeks.

On Wednesday last, the 1st inst., a meeting of the floral committee of this society was held at the Royal Aquarium, Westminster, Mr. Harman-Payne occupying the chair. Several promising novelties were submitted: Miss Adelaide A. Cooper, a large Japanese of a pale rosy mauve; Mrs. Bagnall-Wild, like a Pink; Mrs. H. Weeks, and one or two others. Only one award was made, viz., first-class certificate to

LADY TEMPLE.—A very pretty Japanese Anemone with several rows of ray florets and a good disc; colour soft reddish terra-cotta. From Mr. R. Owen, Maidenhead.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 7, in

the Drill Hall, James Street, Westminster, 1-4 p.m. A lecture on "Some of the Plants Exhibited" will be given by the Rev. Prof. G. Henslow, M.A., at 3 o'clock.

The Royal Gardeners' Orphan Fund.—At the usual monthly meeting of the committee, which took place at the Horticultural Club on the 27th ult., the following special donations were announced: Wimbledon Horticultural Society, sale of flowers, £6 10s.; Sandringham Estate and Cottage Garden Society, per Mr. Mackellar, £5 5s.; Betchworth, Brockham, and Buckland Horticultural Society, £4 6s.; the Rev. A. Lowe, The Vicarage, Rangemoor, Burton-on-Trent, harvest collection, £4 10s.; Mr. A. D. Christie, half of the amount collected through throwing open Ragley Gardens, Alcester, to the public, £2 9s.; one-third of the amount realised by the sale of fruit at the annual exhibition of art and technical work in connection with the Worcestershire County Council, £1 17s. 4d.; sale of flowers at Chislehurst show, per Mr. J. Lyne, £4 6s. The annual general meeting of subscribers was fixed for Friday, February 16, 1900.

A Quick hedge (A. C. N. C.).—Plant your Quicks as soon as possible. Dig the ground at least one good spade deep and plant either in a single or double line, as you please, but if single, plant about 4 inches apart, and if double, a little wider. Trim the tops of the Quicks back about half way before planting and see that the roots are well covered. Not much growth will be made next year, but in the autumn of the second year trim the Quicks in again, leaving from 6 inches to 9 inches of top, and in future years cut in moderately, according to vigour, with the hedge-bill till the hedge is of the height and density you wish it to be. On no account ever dig along the bottom of the hedge, but simply keep weeds and tall grasses down. Five feet is a good height for a railway hedge and 4½ feet will do, but a hedge will require more than five years to reach that height if cut annually so as to secure the proper density at the same time. Without cutting I have seen Quicks reach 5 feet in less than five years, but a good bottom is not got in that way. If your foreman cut 18 inches off your five-year-old hedge after you had already trimmed it he took too much, unless his object was to cut back to cause the bottom of the hedge to thicken up. If the hedge has been properly managed it should by this time be about 18 inches through at the bottom and dense to the top.—S.

BOOKS RECEIVED.

"Gooseberry Grower's Register for the Year 1899." E. Foulds, Bingley.

Names of fruit.—Lima (F).—1, Striped Beaufin; 2, Rosemary Russet; 3 and 4, Kedleston Pippin.—W. A.—Pear Thompson's.—Miss Richardson.—1, Round Winter Nonsuch; 2, Green Costard; 3, Hawthornden (Old); 4, Cox's Orange Pippin.—J. H. P.—1, Peasgood's Nonsuch; 2, Blenheim Orange; 3, Old Royal Nonsuch.—R. W. N.—1, Marie Louise d'Uccle; 2, Soldat Laboureur; 3, Gansel's Bergamot; 4, too far gone to identify.—Surrey.—1, Tower of Glamis; 2, Waltham Abbey Seedling; 3, Maltster; 4, Winter Hawthornden.—W. Collyer (Streatham).—Golden Noble.—Cresta.—1, probably Comte de Lamy, fruit deformed; 2, Chaumontel; 3, Beurré de Capiaumont; 4, Easter Beurré; 5, Rymer; 6, Yellow Ingestre; 7, Brown's Codlin (Spencer's Favourite).—R. W. F.—Pear is Doyenné du Comice.—Anon.—1, Campanula Trachelium; 2, Lobelia syphill ica.

Names of plants.—F. J. Rolkingham.—Salvia Hornitum.

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THE GARDEN.

No. 1460.—VOL. LVI.]

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INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—		Maxillaria grandiflora 371	Chrysanthemum Le Grand 382	Nerine japonica 384	Begonia Gloire de Lorraine. 387
Apple Adams' Pearmain .. 369		Mormodes pardinum 371	Dragon 382	Salvia splendens 388	Chamaerops Fortunei in fruit 388
Apple Devonshire Quarren- den 370		Oncidium serratum 371	Chrysanthemum Marie Cal- vat 380	Salvia splendens and its varieties 382	Clerodendron trichotomum. 387
Grape Buckland Sweetwater 369		Restrepia Lansbergi 372	Chrysanthemum Peter the Great 382	Saxifraga Fortunei 383	Crocus lavigatus 388
Peaches, late, and Plums .. 370		Sophronitis violacea 371	Chrysanthemum Sœur Doro- thea Souille 382	Tacsonia Van Volxemi fruit- ing 383	Crocus longiflorus 388
Peaches on back walls .. 369			Chrysanthemums at Swanley 381	Thunbergias failing 383	Devon, November flowers in 388
Root pruning, advantages of 369			Chrysanthemums, naturally- grown 382		Dublin, a blizzard in 388
Strawberries at Syon 370			Chrysanthemums, new, at Heywood 381		Erantthemum pulchellum .. 388
Roses:—			Chrysanthemums, October. 381		Exacum macranthum 388
Rose Empress 370			Chrysanthemums, yellow, of recent origin 381		Garden, notes from a Cornish 388
Rose Hov. Edith Gifford .. 370					Primula floribunda 387
Rose La France on a wall .. 370					Rainfall, a heavy 387
Rose Prince Theodore Galit- zine 370					Salvia Pitcheri 387
Roses, pruning, in autumn. 370					Sternbergia lutea 387
Roses, some good Polyantha 370					Tibouchina macrantha .. 387
Orchids:—					
Angraecum bilohum 372					
Catasetum callosum 371					
Cologynis, winter treat- ment of 371					
Dendrobium aureum 371					
Dendrobium formosum gi- gantum 371					
Dendrobium Cobiianum .. 371					
Epidendrum evectum 371					
Gongoras 371					
Lycaste Barriogtonie 372					
Masdevallia tovarensis .. 371					
Kitchen:—					
Kitchen gardens, cropping small 374					
Greens, winter 378					
Peas, vegetable refuse for .. 375					
Potatoes, quality in .. 374					
Tomatoes, finishing off late. 374					
Tomatoes, notes on 375					
Garden Flora:—					
Nerine Manselli 378					
Week's Work:—					
Fruits under glass, work among 379					
Kitchen garden, work in the 380					
Chrysanthemums:—					
Chrysanthemum Australian 380					
Gold 382					
Chrysanthemum Australia. 382					
Chrysanthemum Cullingfordi 380					
Chrysanthemum, decline of the incurved 380					
Chrysanthemum Gloire de Rocher 381					
Chrysanthemum rust 380					
Stove and Greenhouse:—					
Acalypha hispida 382					
Begonia Gloire de Lorraine, varieties of 383					
Bouvardia President Garfield 383					
Cardiospermum Halicacabum 382					
Cardiospermum Halicacabum 382					
Carnations, Tree, old and new 383					
Celosias 383					
Drosera dichotoma 382					
Freecias failing 383					
Hyacinths, early Roman .. 383					
Manettia bicolor 383					
Momordica Charantia 382					
Flower:—					
Bed, a pretty mixed 384					
Callistephus sinensis 385					
Crocus speciosus Aitchisoni. 385					
Devon, South, October climbers in 384					
Fuchsia fulgens planted out 384					
Gerbera Jamesoni 385					
Helianthus H. G. Moon .. 385					
Lobelias for stock 384					
Lobelias from seed 384					
Tobacco, the Night-scented. 384					
Tobacco, the Night-scented .. 384					
Societies:—					
French Chrysanthemum .. 385					
Royal Horticultural 385					
Notes of the Week:—					
Alyssum maritimum com- pactum 388					
Anemone Pulsatilla 387					
Anomatheca cruenta 387					
Miscellaneous:—					
"Harper's Magazine" versus artistic gardening 372					
Maple, hardness of the Japanese 388					
Myrtle, the Box-leaved, at Gunnerybury House 373					
Pomegranate at Gunnerybury House 375					
Syon Gardens, notes from .. 378					
Terrace plants 373					
Verbena, the sweet-scented, at Gunnerybury House 378					
Weather, the, in W. Herts .. 388					
Window gardens, prizes for. 372					

ORCHARD AND FRUIT GARDEN.

ADVANTAGES OF ROOT-PRUNING.

WHERE the heads of fruit trees are confined to a limited space, it is obvious that by cutting the shoots back each season the growth made the following spring will be stronger than that of the preceding one unless something is done to counterbalance the root-action. Summer pruning to some degree has this effect, but not to that extent desirable where the head has a very limited space to extend itself in. Take cordon Pears as an example. We shall find that unless something more than summer pruning is practised the trees could not be induced to produce those fine crops that are so often to be seen in well-managed gardens. Many, however, fail to understand that by timely lifting of the trees they are thrown into fruitfulness at a much earlier stage than those which are allowed to look after themselves. It is by no means necessary that all varieties should be treated alike; neither is it advisable to be too hasty in shortening the roots unless there is time to attend to the wants of the trees afterwards. Many trees, both Apples and Pears, do not become fruitful until they have attained age unless specially treated in some way or other. If we take the Blenheim Orange Apple as an example we shall find that in most instances young trees that are left to themselves are fruitless; whereas, if timely attention be paid to their roots, these will commence to bear while young. Two years ago I had some trees that had been planted about eight years from which but very little fruit had been gathered, so that was an inducement for me to see what root-pruning would do. A trench was taken out all round the trees 2 feet wide, at a distance of 5 feet from the stems, and all roots found were severed to the depth of 18 inches or 2 feet. The soil on the ball of earth left for about 18 inches all round was then forked out from between the roots and the roots brought nearer to the surface, the trench being then filled in with a light, rich compost, in which the young roots

rambled freely. Last season the trees were thickly studded with fruit-buds, and if there had been a favourable season I should no doubt have had a good crop of fruit. Half a dozen trees of Bramley's Seedling which had not hitherto given me a bushel of fruit were treated in like manner, and this season these trees have given me far more Apples than they have done during the previous eight years they have been planted. On heavy soils some varieties are apt to make coarse roots and correspondingly strong wood. All the summer pruning that could be practised would not induce such to fruit, but if their roots were judiciously shortened this would prevent this rampant growth and throw them into bearing. We all have observed the short-jointed shoots of old trees that are so thickly studded with flower-buds as to present a picture when they are expanding in spring. Such trees instead of requiring root-pruning need assistance in another way, or they will fail to bring the crop to maturity. When grown in pots it is seldom that fruit trees fail to give a crop of blossom. Their roots being confined, the trees set flower-buds instead of making a strong growth, but when planted in a rich soil where the roots are allowed to ramble at will the growth is long-jointed and sappy, therefore incapable of making fruit-buds. Trees must be kept healthy, but at the same time not encouraged to make strong, ill-ripened wood, which is of no use. In small gardens where a variety is of more service than quantity it becomes necessary to plant several trees, all of which must be duly kept within bounds, otherwise they would soon become overgrown and spoil each other. If such have attention given to their roots for a few years till the crop of fruit prevents them from becoming over-luxuriant, there is little doubt but that they will pay their owners for the trouble thus bestowed on them.

H. C. PRINSEP.

Grape Buckland Sweetwater.—As a successful exhibitor of this fine Grape I agree with all

that "H. H." says in its favour in THE GARDEN of October 28. I consider it far superior to Foster's Seedling or any white Grape that ripens in the early summer months. As "H. H." remarks, one rarely sees good examples of this Grape, but probably this is owing to growers relying too much on young Vines for a crop. My experience of it is that on young Vines it is a shy bearer and the bunches come loose and badly formed, but on healthy Vines of several years' standing the bunches are large and handsome, the berries fine and of a rich amber colour.—H. F.

Apple Adams' Pearmain.—I recently saw this Apple in fine form on a wall cordon at Blickling Hall. It is more conical in shape than the majority of Pearmain, is a good keeper and fine for dessert. Whether this Apple is identical with any other of this section I am unable to say, but in one of the leading grower's fruit lists, I do not see it mentioned. Neither is that "useful for poor soils and exposed positions Apple," Brighton Pearmain, and this variety I know well, having found it a bearer when other sorts failed, a long keeper, and of a sweet, refreshing, though perhaps not the richest flavour. Most of the Pearmain are good keepers and deserving of any extra care which may be bestowed on their culture.—B. S. F.

Peaches on back walls.—Failure frequently occurs from planting Peach trees on the back wall of a vinery, as "A. D." points out on p. 272. I grow Peaches in such a position, and, given favourable treatment, the crop is invariably as good in one position as the other. Perhaps the most remarkable crop of Peaches from a back wall I have yet seen was at Bromham Fruit Farm, near Chippenham, this summer. The crop was a late one, and the house some 40 feet in length, 10 feet or 12 feet in width, and with such a low roof that one could scarcely stand upright under it. Here there were trees occupying a front trellis, trained very near the glass, and the amount of light allowed the back wall trees was so small, that most fruit growers would wonder how any fruit could be had. The crop as I saw it, however, was very heavy, much too heavy, in fact, as also was that of the front trees, the Peaches being under-sized and not very well coloured. There was no rounded trellis here to provide a maximum of light to the wall trees, and the great crops borne

remain a mystery. I can only assume that the low and somewhat flat roof, the suitability of the soil for Peaches, and plenty of water could account for it. I have often seen trees growing under much more favourable conditions bear much lighter crops.—W. S.

Apple Devonshire Quarrenden.—As an espalier, this useful, richly-coloured dessert Apple, has occasionally been commented upon in the pages of *THE GARDEN*, and in my opinion no orchard, however limited in size, is complete without at least one tree of it. Nowhere have I seen this Apple so frequently as in the eastern counties, though I believe it is very plentiful in Hampshire. A few days ago an amateur showed me a fine healthy espalier tree growing in a somewhat sandy soil. It annually produces good crops of finely coloured fruit, and is the true variety, as I have not the least doubt that there are two distinct sorts. I grew one in Nottinghamshire and the fruits were always larger than the type, more leathery, and, although on an espalier facing nearly due south, it never even in the most tropical summers took on that beautiful brilliancy characteristic of the true Devonshire Quarrenden. Intending planters should make a note of this. The flesh of the true Quarrenden is often quite coloured with a pink tint.—NORWICH.

Strawberries at Syon.—Both inside and out these are largely grown at Syon. I recently saw there a fine batch of 5000 in about three sorts. Royal Sovereign predominated and did not bear what "A." (p. 273) describes as a meagre look that so often happens at this season of the year. They, on the contrary, had a very healthy—indeed robust—leafage and stout promising crowns. I inquired of Mr. Wythes if Stevens' Wonder was represented among the batch, to which a very emphatic reply in the negative was given. Mr. Wythes does not believe in the practice of layering into fruiting pots direct for varied reasons. The extent of work entailed in layering and potting up of such numbers must, however, entail a considerable amount of work for a private garden having a limited labour staff. Outdoors they are grown entirely as annuals—that is to say, after fruiting once they are destroyed and new beds made for the next year's supply. The practice answers admirably at Syon judging from the condition of the beds as I saw them. For the forcing stock a large bed is planted, and in the spring all flower-trusses are removed as soon as they appear, so that the energy of the plants is concentrated on the production of runners. These plants allowed to stand bear a fine crop the next year, when they, too, are cut off and others take their place. Mr. Wythes has every reason to be satisfied with his prospects for next year.—W. S.

Late Peaches and Plums.—There are many late Peaches, but I confine myself to Walburton Admirable and Gladstone. Walburton Admirable I think, all points considered, the best late kind. I have a very fine variety that has been in these gardens for forty years. My tree is growing on a Plum stock and on a back wall. This gives me a fine crop, usually through September. It is large and of good flavour, but not so highly coloured as some kinds. Some find it shy to set, but this is not the case with me. Gladstone does magnificently here. I have two trees growing on a front trellis. Every other light can be thrown right open, and it is astonishing how this improves the colour. The fruit is very large, solid, and of the brightest crimson. I think it far in advance of some kinds as regards flavour. Sea Eagle is not to be compared with it, although growing side by side. I should not plant Sea Eagle again. Gladstone is a good grower and does not mildew so badly as some kinds. Although this is an early season, I had good fruit till about the middle of October. I am induced to try Golden Eagle, having seen it fine some years ago at Lyndford Hall, and it does well on open walls at Bovey House, near Linton. Have others grown this kind under glass for late work, and with what results? Good as late Peaches are for cold houses, I consider late Plums more desirable. I grow Reine Claude de Bavay on an up-

right front trellis close to the glass. Here it gives grand crops every year. This year my last dish was gathered on October 12. Golden Drop cannot be excelled; trees growing beside the above crop well and give a supply into November. Here the fruits can hang till they shrivel, and this is when they are at their best. I find these Gage Plums more profitable in these positions than Peaches.—DORSET.

ROSE GARDEN.

SOME GOOD POLYANTHA ROSES.

ONE of the loveliest Roses this autumn has been *Perle d'Or*, which still remains unsurpassed in its class. These Polyantha Roses should be grown more extensively than they are at present. An idea is prevalent that they are of very diminutive growth. That they may be kept very dwarf is not denied, for one may cut them down to the ground every spring, and they will flower just as freely; but still they will, if left almost unpruned, make really fine bushes. They are delightful subjects to plant upon walls in front of greenhouses, provided a good deep border is prepared for them. Like their relatives, the Teas, the plants, if not on their own roots, should be on the seedling Brier, and everyone who has grown Roses upon this stock knows how deeply its roots will strike down. This, I think, is a valuable feature of growing Roses upon the seedling Brier, for naturally, if the subsoil is good, the roots suffer less from drought and the growths are produced later in the season. One of the most profuse blooming of the Polyantha Roses is *Gloire des Polyantha*, yielding an abundance of deep pink trusses. Another valuable novelty is *Perle des Rouges*, certainly the richest and brightest colour at present obtained. *Anna Marie de Montravel* is one of the purest white Roses grown, every bloom upon the immense corymbs being perfect in form. *Cecile Brunner* should be grown in every garden if only to afford buds and sprays for button-holes. Every tiny bud is of such exquisite shape and the colouring of pale pink so clear and beautiful, that it is sure to find favour. Among pale yellow kinds which are not yet numerous *Etoile d'Or* is the prettiest, but *Madeleine de Chatellier* is by far the better grower. *Mosella*, sent out as a Polyantha, should be classed with the Teas. In form it is as perfect as a *Camellia*, white in colour, but with a lovely rich and clear yellow ground. *Mme. E. A. Molte* has delightful little buds of a chamois-yellow colour, changing as the flowers open to rosy white. Upon short stems these Polyantha Roses are lovely for the centres of very small beds, and they, together with the Monthly Roses, such as *Mme. Laurette Messimy*, *Mme. Eugène Resal*, *Queen Mab* and *Irene Watts*, should be more often planted in dwarf standard form. How pretty these Polyantha and China Roses are for conservatories in early spring! They strike readily from cuttings. If some plants are forced, their growths yield splendid cuttings inserted immediately after flowering. The more healthy and solid the cuttings, the better plants will result.

P.

Rose Hon. Edith Gifford.—Many of the Teas give a much larger number of flowers in autumn than this, but I think there are few that give them of such exquisite form and colour. The pink shading in the centre of the flower is intensified at this season of the year, and opening slowly as they do, the blossoms come of great substance. It was one of the first to bloom here this spring, and as there are now (October 30) fine flowers still open, it looks like being at least

one of the last of autumn. The plant has a fine strong habit of growth.—H. R.

Rose Prince Theodore Galitzine (Tea).—This is a gain in the right direction. There are none too many rich yellow Roses suitable to our climate, but a new-comer is welcomed if it possess a sturdy character. That this Rose is of this nature I have no doubt. In colour it resembles that lovely variety *Souvenir de Mme. A. Levet*, which has turned out to be exceptionally tender, and I should not attempt to cultivate it outdoors, but under glass planted out it would be a most attractive variety. The new kind appears to possess a far more vigorous nature, and has every appearance of being a hardier Rose. The colour is a rich deep orange-yellow, not so intense as in *W. A. Richardson*, but yet richer in tint than the majority of yellows.—P.

PRUNING ROSES IN AUTUMN.

THERE can be no doubt that Roses as a whole are much overpruned, more especially when they are required for garden decoration as distinct from exhibition flowers. I believe that far better results would follow autumn pruning of all such kinds as the Teas and most others that are not cut hard back in spring. Such kinds as *William Allen Richardson* or *Aimée Vibert* are often cut about in spring to their detriment, the shoots being cut either too hard back or left in a thick tangled mass. If such trees had a little of the small spray cut out from the centre now and the weak, unripened points taken from the shoots, they would not start any the earlier in spring, while the buds that remain would be stouter and harder, owing to the extra sap being diverted to them and the light and air playing freely about the whole of the tree. If this slight thinning of the shoots were done now, I see no reason for doing any pruning at all in spring to any true garden Roses. Those with the habit of *Crimson Rambler*, for instance, that keep sending up strong shoots from the base and flowering upon them the ensuing year may have some of the oldest and most straggling of the wood cut away. Frosts in winter would have more effect upon those left, making them harder, and the resulting young shoots would be less liable to succumb to cold winds than if left crowded and dark in winter. Again, when the autumn flowering of the Teas is over the points of the blooming shoots may be taken off. The upper eyes may be lost in spring, but this is no more than often occurs when spring pruning alone is practised. It is quite certain that the more open the trees are kept now, the harder they will be in spring.

A GROWER.

Rose Empress.—What a charming autumnal Rose this is! Many Rose growers will remember a variety named *Mme. Bellenend Ker*, raised by Guillot some thirty years ago. *Empress* is not unlike this variety, but it grows much more luxuriantly, the plant developing into quite a large bush in a very short time. Its white, pink-tinted flowers make a delightful button-hole, being of perfect form, small, and very neat. As a standard this Rose is a great success, the fine head of growth and informal habit fitting it for this method of cultivation.—P.

La France as a wall Rose.—Has anyone tried this popular Rose upon a low wall? I do not mean the climbing kind, which is not at all constant, but the well-known dwarf type. Whoever plants a number of it near a low south or west wall or fence will be delighted with the behaviour of the variety. A good plan is not to nail the growths immediately on the wall, but to run some three or four wires, which should be painted, the whole length of and about a foot from the wall. Upon these wires spread out the branches. Planted in a good prepared border the growths produced in this way would astonish the cultivator, and would furnish him with an acceptable number of this best of all sweetly fragrant pink Roses. The pruning adopted would require to be of

a somewhat different character from the orthodox method. The three or four-year-old growths are almost entirely removed, which gives full opportunity to the one and two-year-old wood to produce the blossom. It is not advisable to prune the shoots retained too much. If good, plump, dormant eyes can be found about a foot or 18 inches from the ground, cut back to these rather than prune lower down. If the plants are growing in a really good Rose soil and they are all upon the Brier stock, they will not fail to send up vigorous young shoots. Many good Roses suitable for cutting could be cultivated in the manner described.—P.

ORCHIDS.

GONGORAS.

Few plants are more easily grown than Gongoras, and the flowers are very pretty and interesting, yet for some reason or other they are thought very little of by most growers. Of course, the flowers have not the same gorgeous colouring, nor do Gongoras make so fine garden plants as the Cattleyas and Lælias and a few other popular genera, but for all that they are in most cases well worth growing and in almost every case very free flowering. The flower-spikes are mostly pendulous, and for this reason the plants are best grown in baskets, otherwise they would thrive equally well in pots. The effect of the flowers is lost if the plants are grown on the stage, while if tied up they lose all grace and beauty. Owing to their very free-rooting nature Gongoras must have a fair amount of room in the baskets and a sound compost, equal parts of peat fibre, loam and chopped Sphagnum Moss suiting them well. The drainage must be exceptionally good and free, for few plants need more water while in active growth. *G. atro-purpurea* I have had continually in growth or flower for two years. As fast as one set of flower racemes was past another lot opened, and there are others equally free.

This being so, it is obvious that no decided resting or growing season can be laid down, but that the plants must be encouraged as long as they seem determined to grow. In the case mentioned above the roots not only filled the baskets, but pushed upwards and outwards into the air, and all who have had experience with plants of this kind know well how freely they imbibe moisture, never seeming to get enough of it. It would be quite different with sluggish roots or unhealthy plants, but such specimens as I mean can hardly be kept too moist in warm weather. Should they be inclined to rest in winter, by all means let them and allow less water and heat.

Regarding the growing temperature, this may be with the Cattleyas, and when at rest with the Mexican Lælias. Thrips are rather partial to the foliage, also red spider, and to keep these in check, frequent overhead washing with the syringe is necessary. The genus contains a score or more of species which it is not necessary to describe in detail. Several of these, including *G. odoratissima*, *G. atro-purpurea*, *G. truncata* and others, have often to do duty under the name of *G. maculata*, but they are all distinct. H. R.

Oncidium serratum.—The long scandent racemes of this Orchid are very bright and showy just now, and are useful for grouping. The flowers are at a considerable distance apart on the spikes which occur in the centre of the young growth. Under cultivation this plant does well in quite a cool and moist house, whether an Orchid house proper or fernery does not matter, and it likes fairly large pots filled with equal

parts of peat and Sphagnum Moss in a rough, open condition. The plant at first should be set fairly low, as the growth ascends each year and soon grows out of reach of the compost.

Catasetum callosum.—The peculiar tints of brown and green in this Orchid make it very attractive, and it has the same quaint appearance as others in the genus. I think it is not very generally grown or known, but it is certainly worth a place where this interesting section is cared for. Its culture is simple, a hot, moist house while making its growth, ample light to ripen the pseudo-bulbs, and a long dry rest in winter suiting it well. The most troublesome time is when young growths appear, as if moisture in excess settles in these, it is apt to cause them to decay.—H.

Dendrochilum Cobbianum.—Now that the flowers of this Orchid are past, no time should be lost in getting the plants put to rights at the roots, and any that require repotting should have this attention. The forming growths soon begin to root freely after being disturbed, and entering the fresh soil at once soon re-establish the plants. They should have the lightest and best position at command in the East India house, with ample moisture at the roots and in the atmosphere until the growth is complete. When the pseudo-bulbs are fully matured give less water and a cooler position.

Epidendrum evectum.—This belongs to the section of the genus having long, leafy stems and loose racemes of flowers at the extremity of these. In strong plants these are 4 feet and upwards in height. Like several others of its class, it delights in ample heat and moisture during the time the stems are growing, and the roots being vigorous, a rough open description of compost suits it best. Ample root moisture in summer and sufficient to keep the stems plump in winter should also be given. It is a native of New Grenada, and though long introduced, is seldom seen under cultivation.

Mormodes pardinum.—This species often flowers in late autumn, and I have noticed it in several collections of late. It is certainly one of the best of the genus, and its variety unicolor is quite a delicate and pretty kind without the spotting as seen on the type. It is often grown in baskets, and the racemes then take a semi-pendent direction, which is very pretty. The compost must be good peat and Moss in equal portions, a little loam being mixed with it for strong plants. During the growing season *M. pardinum* likes ample heat and moisture with a light position. When at rest much less heat suffices, and the roots should be kept on the dry side.—H.

Maxillaria grandiflora.—This charming old Orchid is worth growing for the sake of its delightful fragrance only, while it is also one of the prettiest of the genus. The plant delights in ample atmospheric moisture, with plenty of water at the roots when healthy, and unless these are given it is very apt to be over-run with insects, especially black thrips. Its culture is remarkably easy, and consists in keeping it in a cool house, the compost for strong plants being equal parts of peat, loam, and chopped Moss, with abundance of crocks and plenty of drainage added. Sponge the plants directly any kind of insect is seen about them, for these rob the leaves of their fine colour, which is one of the chief attractions of the plant.

Masdevallia towarensis.—The flowers of this Orchid are perhaps the purest white of any, yet they have not that dead-looking appearance characteristic of many white-flowered Orchids. It is so free-flowering, that it is well worth growing for cutting alone, besides which the flowers have a very fine appearance on the plants, the white blooms and deep green leaves contrasting very prettily. The spikes continue to produce flowers for several seasons, but though it is not worth while on this account to leave all the old ones on, yet it is best not to cut them too close. *M. towarensis* may be grown with other cool

Orchids provided the winter night temperature does not fall below 50°, but in a very cold house the leaves are apt to spot badly.

Dendrobium formosum giganteum.—It is pleasant to read of what is usually considered a difficult plant being so well cultivated as this Orchid evidently is by Mr. Hudson at Gunnersbury. I was much interested in the system so well described by "H. J. C.," and I feel convinced that so long as the Gunnersbury House plants can be kept to this annual routine of growing, flowering, and resting each in their proper season, so long will they be satisfactory. *Dendrobiums* as a whole, and this somewhat erratic kind in particular, are never so satisfactory as when they are kept to this annual cycle of growth and rest, and keeping them regular in this way is far more likely to prove a panacea to the ills that *D. formosum giganteum* is heir to than any details as to compost and temperatures often advanced.—H. R.

Winter treatment of Cœlogynes.—It is not everyone who is successful in retaining the bulbs of *Cœlogyne cristata* in a plump condition from autumn till spring. The chief reason doubtless is attempting to keep the plants in an almost root-dry condition, which invariably ends in shrivelling. I saw an extensive and very healthy collection in a gentleman's garden a few days ago, and on remarking to the gardener how plump every bulb seemed, he replied that the plumpness, which the plants always retain throughout the winter, was due to a frequent supply of water. He added it is a great mistake to attempt anything like dryness at the roots. Some who keep the roots dry give quite a cool house during winter, and of course in such quarters root-moisture would soon work mischief. The best and safest temperature in order to allow of the moisture recommended is one of about 60° at night.—B. S.

Dendrobium aureum.—This I have already received from one of my correspondents, but there is little use really in endeavouring to get it so early. It would be as useful in a month's time, and the plants after flowering would have a more suitable time in which to make their growth. It is a charming little species, more especially on account of the delicious fragrance of the blossoms, which is comparable to that of no other flower. Formerly *D. aureum* was grown a good deal on wood blocks, but this treatment is too poor for it, and far better results are obtained by growing in small pots or baskets in a compost of equal parts of peat and Moss. Its growing season begins directly the flowers are over, and for this reason the later it blooms the better. As the pseudo-bulbs or stems develop, the plants may be taken to the open air, and if kept out until the end of summer and kept on the dry side, the growth will be hard, well ripened and sure to flower freely. There are many varieties more or less distinct, and this is, perhaps, accounted for by the very wide range of country over which it is found.—H.

Sophronitis violacea.—The brilliant *S. grandiflora* is well known, and is a very useful autumn and winter-flowering Orchid, but the species named above is seldom seen in anything approaching good condition. One reason of this is that many gardeners, amateur and otherwise, will persist in treating all members of one genus alike. Now *S. grandiflora* delights in small pans or baskets filled with a little peat and Sphagnum over good drainage, but *S. violacea*, on the other hand, is of a rambling habit, and likes to run up a soft block of Tree Fern stem or a lightly dressed raft of teak rods. The rhizomes carry the little bulbs at a considerable distance apart, each one sending out a tier of roots on its own account, and to place such a plant in a small pot where it would not have the chance to extend itself without at the same time getting out of reach of the compost is quite wrong. As to temperature, anything a little below that of the Cattleya house will be best. In the coolest house the conditions during winter, when *S. violacea* is often more or

less active, are not suitable for it, but if placed in any great heat the growth is almost certain to be over-run with insects, especially thrips. As hinted above, the plant is usually more or less active, so drying off, as usually understood, must not be practised. Wherever the little roots are seen by their green tips to be on the search for moisture it should be provided. Should insects attack the plants, lose no time in clearing them out, for a species of such small stature will be very easily injured. The flowers vary a little in size and colouring, and are usually of a soft rosy purple.

Angræcum bilobum.—Though a dwarf species, this is an extremely pretty one, and the long racemes of pure white flowers have a fine effect against the deep green leaves. Its culture requires care, for the plants are small and easily checked by an ill-regulated system of ventilation in winter, a dry, harsh atmosphere or mistakes in watering; but, given regular and consistent treatment, the plant cannot be called difficult of cultivation. I like to give the plants just comfortable room in the pots and no more if they are to be so grown, but small teak baskets are also useful for them, as in such they may be brought well up to the light, a position they like. The East India house is the best for them, and during the whole of the growing season a strong, moist heat should be maintained. Only a very little compost of any kind is needed, a thin surfacing of clean freshly-gathered Sphagnum Moss being best. Large pieces of crocks should be laid over the bottom rods of the basket, the sides being lined very thinly with Moss. During winter not much water is needed, but enough to prevent the leaves shrivelling must always be allowed.—H.

NOTES AND QUESTIONS.—ORCHIDS.

Lycaste Barringtoniæ.—This species, a native of Jamaica, was first imported in the eighteenth century, and is still occasionally sent to this country, but it has never become at all popular, and is less so now than formerly. It has yellowish flowers and grows very strongly in a cool house, where to be satisfactory it should be kept moist all the year round, and potted in peat, loam and chopped Moss.

Restrepia Lanebergi.—The flowers of this Orchid are small, and some may call them insignificant, but they are really charming, and it is a pity such a lovely little thing has become so rare. The flowers have an orange-crimson tint, spotted with deep crimson. It is one of the prettiest in the genus, and may be grown in a fairly cool house with Masdevallias, the pots used being rather on the small side than otherwise.

"HARPER'S MAGAZINE" VERSUS ARTISTIC GARDENING.

IN the September number of "Harper's Monthly Magazine" there appeared an article extolling builder's garden design. As is usual in productions of this kind, the writer appeared to think that his strongest position of attack and defence was in abuse and ridicule of artistic gardening. The usual arguments in favour of the pattern style were duly set forth, and there was nothing new of importance in the essay excepting the very ugly illustrations, which were its justification, or rather excuse.

The mistake made by these apostles of the T square and compasses is in supposing the two styles to be hostile; that the safe existence of either of them can only be assured by the death of the other. They are not hostile. Picturesque gardening has this advantage: its spirit is basic both in Nature and Art, and it must survive so long as there are trees, bushes, and flowers not cut into patterns in gardens made by man or in gardens made by God. The enemies of such gardening are enemies because they do not understand it; because they have eyes and see not; because it is all

around them and they do not know it. Yet even builder's gardening itself cannot well get on without natural form, and most extensive formal schemes and all the more interesting ones find in it much of their attraction. Some even of the finest of the Italian gardens depend much on informality for their best charm, on uncramped forms and irregular arrangement of vegetation.

It is always assumed by the opponents of informal gardening that it is an imitation of Nature, and thus out of place round a house where everything should suggest the restraining hand of man. It is not an imitation of Nature any more than a picture of Claude or Turner. The art could not have existed without Nature to suggest it, to provide motives and materials; but these motives she scatters around with a hand as reckless as generous, and the painter or gardener is compelled to choose from them, not to take them indiscriminately. He finds some of them better than others, and selects and alters, adds and subtracts to make a composition of unity; and the innate faculty of doing these things being exercised and developed, the artistic power of realising natural beauty, which is the justification of the artist, is produced. To do this, not with brush or pencil, but with the real and perfect materials of trees and plants and on the broad and varied surface of the earth, is surely as fascinating and idyllic an idea as art possesses. That it can be realised is proved—sometimes, and when it is proved it is often not recognised because of its very grace and fitness. These zealots of formal gardening are usually architects of a certain class who do such work when they can get it, and are struck by its profitableness. What a fine thing it would be (for them) if every house had a stone garden! Thus, being unable to understand an art that is not of lines and measures, whose proportions cannot be reduced to mathematics, they falsify its principles to suit their own purposes and draw conclusions as shallow as they are unfair. They all show a surprising ignorance of landscape gardening and its best examples and an equal familiarity with some of its worst. It would be as fair to take the crudest row of speculators' houses in London or New York as a type of contemporary architecture, or the saddest impertinences in terracotta and tortured Alternantheras of the architect-gardener as a type of formal gardening. It can hardly be supposed that these misrepresentations are made deliberately and of knowledge; they can only proceed from haste and ignorance. They show that their makers are quite impervious to a kind of beauty in which most of the civilised world delights, or at least by which it is soothed and pleased in one way or another.

To what, then, does all this tend? Does it mean that the endless phases of horticulture, from the village garden to the great parks of Europe and America, are things of no account? Has the cottage with its Vine-covered porch, its bushes and annuals and tiny plot of grass, as well as the calm and majestic vista of lawn and wood, at last been found futile and valueless? Does it mean that they are not beautiful, and so not art, or that they must all be swept away to make room for the barren pattern, the puissant triangle and the satisfying circle, for the pliant forms and many-twinkling smile of masonry and cast-iron, for the free and genial outlines of sheared plants and bushes? And are we to suppose that the myriads on both sides of the Atlantic who delight in the trees and flowers of the field and their unaffected array are imagining a vain thing? Is the vital and ever-renewing fascination, unreachable by any art dependent on geometry, that they find

in these living children of the soil a delusion and a snare? And are they to be educated into regarding them as mere materials for making colours and forms crudely based on rigid and unchanging architecture?

Naturalistic gardening at its worst is never so bad as the worst of builder's gardening, for it shows us the un mutilated forms of plant and tree. Linoleum patterns! How many of them are as interesting as most of the absurdities perpetrated with coloured plants and the devices that often go with them! Naturalistic gardening at its worst may be trifling, but it owes it largely to the confusing wealth of its material. It is so difficult to know when to stop selecting things from the tempting catalogues of the nurseryman. These great resources bewilder the average designer of a garden, who is usually an amateur or local nurseryman, and he fills in too often with freckled monstrosities or the latest freak in variegation. Thus he gets "variety" of a poor sort and loses general effect, and the serene art of naturalistic gardening is supposed to be a thing of pettinesses and superfluities, and its enemies revile it for the things it has not done.

H. A. CAPARN.

PRIZES FOR WINDOW GARDENS.

NOT long ago I spent several weeks in summer in the little English village of Ketton, and while there came to know of a pretty custom which it seems to me might be introduced into this country—that of giving prizes for the most pleasing windows filled with house plants. The houses in Ketton are built of stone, and many of them were in existence as long ago as when the Pilgrims were coming to this country, and have been lived in ever since. Almost without exception they stand close to the street, for English gardens are behind the houses, or behind high walls, and so the quaint lead-sashed windows are so near the sidewalks that the flowers which fill them show to the best advantage. A small fund had been set aside some years before by a lady, the income to be devoted to giving prizes each year to the owner of the finest window garden. The sum available for premiums was not large—as I remember it now £2 a year—and the only restrictions were that no one should compete who had a greenhouse—small glasshouses for forcing are much more common in England than they are here—that the competition should include only one window in a house, thus putting the occupant of the smallest house on a fair footing with her more prosperous neighbours, and that the general scheme of arrangement should be decided on at least one month before the day set for awarding the prizes, and not altered during the month. This last condition was to prevent anyone from procuring greenhouse or other plants at the last moment and making a temporary display. There were three judges. The year I was there the judges were the vicar's wife, another lady, and the village schoolmaster. There was a great deal of variety in the different windows, more than one would at first think possible, for the English are natural gardeners. The interest taken in each other's windows as the designs developed was intense, not only by the contestants, but by all the residents of the town. The window which took the first prize the year I was there was a study in green and yellow. A number of shelves were fastened across the window inside, and alternate shelves were filled with pots of Musk, with its delicate light green leaves and yellow flowers, and pots of Lobelia, with dark green foliage and dark blue blossoms. There were enough shelves so that the window was filled solidly full by the day the judges made their tour of inspection, and the effect of the mass of foliage and flowers in the soft grey setting of time-worn stone, of which the cottage was built, was very beautiful.—M. B. THRASHER, in *Vick's Magazine*.

TERRACE PLANTS.

WELL-GROWN plants in tubs or vases for the purpose indicated have an individuality quite their own. Given suitable positions for them, they are most attractive and add greatly to the charm of a garden, especially that part of it which is contiguous to the house. Our forefathers used to adopt this system of ornamentation during the 18th century to a large extent, as may be gathered from cuts and illustrations of the period. Their plants, however, were in my opinion too formal, being kept so by constant stopping and pruning. We see indications now

inherent and to the United States. As seen growing in the nurseries in and around Ghent and Bruges these Bays are wonderfully attractive, serving many good purposes. Oranges in tubs for the decoration of our terrace gardens are not now so often to be met with as they were a quarter of a century back, nor does it appear that any of the trade hold any specially good stock of them. This is to be regretted, for when well grown they are splendid features and decided acquisitions for the purpose in question.

There are other plants, however, which should

are only intended as such, finding a market chiefly in Germany, being in request most (so I am informed) at marriage festivities. My plants in tubs of both Myrtles and Aloysias (see illustrations) are now from nine to ten years old, all of them being my own propagation—the Myrtles from layers, so as to save time, the Aloysias from cuttings. The Myrtles were layered into 3-inch pots from an old bush during the summer of 1889, each layer when rooted making a compact, well-furnished example with five or six shoots. These have been grown on until now they are from 5 feet to 6 feet, and some 7 feet in height, with a diameter of 5 feet in most instances. By regulating the growth and by a small amount of tying they are now almost self-supporting. In the earlier stages I potted them annually, then every other year until tubs were adopted. They were placed in their present square tubs in 1898, from a pattern furnished by Mr. Leopold de Rothschild. These tubs, and all others of the same shape, are made of Pitch Pine as a framework with slate interiors, so that nothing but the slate comes into contact with the roots. By this means there should not be any risk of premature decay in the case of the wood, whilst the slate is better than wood, as it pertains to the roots.

The Aloysias are treated in a somewhat similar manner. These were struck from cuttings in 1890 (in the spring), being planted out in May, and kept to one shoot to each plant in order to obtain as long a stem as possible for the foundation of the future specimens during the first season. These have now developed into large plants, partaking more of the standard form, the tallest being from 7 feet to 8 feet high. This season in the spring I put two into the square tubs from round ones, and I find the increased rooting medium has greatly benefited them; so much so, that now I propose putting other specimens into the same kind of tub. The square tub has a better appearance, too, than the round one, being also safer against toppling over during strong gales. In the painting of these tubs dark green prevails. I find the best results follow when the Aloysias are started into growth in an absolutely cold house or in a sheltered spot out of doors, preferably the latter. The foliage is in consequence quite hardy and does not drop, which failing occurs when grown on early inside during a cold spell of weather in May. The Aloysias are pruned as in the case of a specimen Fuchsia and but little tying resorted to. The soil I use consists chiefly of turfy fibrous loam with some leaf-mould and a little lime rubble, all being rammed down firmly. The Myrtles have never been reduced at the roots, but the Aloysias have (again as with Fuchsias), and then placed into the same size of tub again.

The Pomegranates (both double scarlet and white) are grown as standards, these being imported plants. The difficulty with these has been to get them to flower. I found pruning, either severe or moderate, did not produce the desired results. Then I tried the let-alone plan, and this, the second season of trial has been very satisfactory in the case of the scarlet variety, the multiplicity of weakly shoots being more productive of flowers. The white variety has not responded so kindly; perhaps it may do so another year. These I treat like the Myrtles, not disturbing their roots. Next spring, however, I hope to put them into the larger square tubs using, in



The Box-leaved Myrtle in a tub at Gunnersbury House. From a photograph by G. Champion.

in many gardens that a revival is setting in in their favour, but I trust it will not develop into the strictly formal character followed by our forefathers. It need not be so in any, even the slightest degree; rather let us have a free, unconventional growth, with sufficient modification of the form to ensure well-balanced examples. We have quite sufficient proof that such plants are being sought after when we scan the advertisement columns of the weekly gardening papers. Sweet Bays, too formal oftentimes, are, we know, grown by tens of thousands in Belgium chiefly for exportation, but not so much to England as to other parts of the Con-

receive encouragement, such, for instance, as those now illustrated, viz., Pomegranates, Myrtles, and Aloysias (otherwise Lemon plants or scented Verbenas). These all serve distinctly good purposes and find plenty of admirers, as I can personally testify in the case of our own plants. When I have been questioned as to the sources of supply for Myrtles and Aloysias I have been compelled to answer in the negative. I do not know where they can be procured in any quantity of full specimen size. Small plants of the Myrtle, i.e., the Box-leaved form, are largely grown in Bruges and around, but these are quite pigmy plants and

addition to the soil already alluded to, some fibrous peat.

All of these plants have to be housed in this locality during the winter season for safety. So long as the frost to which they are subjected is not more than 5° or 6° they will not catch any harm. With more than this the tubs should be protected, but then even there is a risk which it is not safe to incur. So far I have housed them in an empty museum, but now, owing to their increased size, a larger place is being made ready for them, with more light in addition. The Myrtles have been used every season for the past four years in London; they stand well in Park Lane and never return any the worse for their change. Now these Myrtles are well established they flower most profusely every year, being at their best during September. The Aloysias have also been used for the same purpose. In each case a sunny position is preferable. Veronicas, as V. Andersoni, V. Hendersoni, and La Séduisante, are also being grown for the same purpose, but these are not yet at their best; to form such into standards takes time. The silver variegated form of *Euonymus elegantissimus* is also being brought on in the pyramidal shape. This, unfortunately, is not hardy; if it were so it would be a grand plant for more general planting. I treat these—Veronicas and *Euonymi*—as in the case of the Myrtles, &c., keeping them just free from frost.

J. HUDSON.

KITCHEN GARDEN.

QUALITY IN POTATOES.

THE first aim of a Potato grower should be to obtain quality, and in the selection of varieties this most important attribute should receive consideration. Speaking of varieties of Potatoes, one has to admit that their name is legion, and year after year new sorts, many of them, perhaps, only so-called, are placed on the market. Considering this, it is a wonder that the whole thing is not in a state of chaos and that varieties have not got mixed up in a perplexing medley. But such is not the case, and the reason is, I think, that out of the almost unlimited number of varieties in existence there is only a small proportion possessing good all-round qualities, and these have got a firm hold on public favour. The few leading varieties of both early and main-crop Potatoes are known and grown in every county and nearly all localities, which goes to prove that if a Potato possesses good quality it is certain to become popular. Nor is a tuber of this character long in gaining public favour, and if an illustration be wanted, take the well-known variety *Up-to-date*. This Potato is of recent introduction, and yet perhaps no maincrop sort enjoys a wider popularity. It would be interesting to know how many new varieties of Potatoes have been put on the market since *Up-to-date* was introduced, and how far the majority have succeeded in gaining public favour.

Admitted, then, that there are only a few really popular Potatoes, the advisability of introducing so many new sorts may be questioned. The argument is quite feasible, and it is an open question whether we are not getting too many named sorts of Potatoes, because numbers of them have so great a similarity that it would puzzle an expert to tell the difference. Considering the tendency there is to swell the already large Potato family with varieties that may or may not be distinct or new, it is quite time some means was adopted to put a check on the output. As the matter now stands,

there appears to be no reason why any individual should not raise a Potato, or get it from some other source, and send it out with a name without ever taking the trouble to ascertain whether it is the same as some other sort already in commerce. At the same time it appears to be equally necessary that new varieties should be introduced, for without these there would be a certainty of deterioration in the tuber and a possibility of its going out of cultivation altogether. In spite of arguments to the contrary, facts go to prove that the existence of any variety of Potato has a limit, according to its constitution. The best of Potatoes, however, perform a double office, for not only do they provide us with a staple food during their existence, but they are the parents of the standard sorts which follow them. If support is needed to the statement that even the best of Potatoes do not last indefinitely it can readily be found. Think of the grand old varieties which were popular say a quarter of a century ago. Referring to Potatoes that are on the wane, take *Magnum Bonum*, which still has many supporters. At one time this was the most popular main-crop Potato in cultivation, but the same cannot be said of it now, and the reason is that it has lost some of the high qualities it once possessed. In some districts where *Magnum Bonum* was the staple variety, it is hardly grown at all, and though I am quite prepared to be criticised for saying so, I am of the opinion that it is slowly following in the wake of other good sorts. Many of our best varieties, including *Up-to-date*, owe their origin to the well-tried *Magnum*.

I am not sure whether the ways adopted to encourage the culture of the best Potatoes are as good as they might be. Too much attention is given to appearance and not enough to quality and productiveness. The monster tuber is not encouraged in the best gardens, and rightly so; but at small shows a prominent class still is that for the heaviest tubers, and the gross, malformed specimens seen prove that this is not encouraging the best culture. We all know the value of an even tuber possessing no deep eyes, but this is not everything in a Potato, and tubers that are nice to look at invariably take first prize irrespective of their eating qualities and cropping. I know of one Potato now, a pretty kidney, which I have seen among the prize-winners at a score or more shows this year, and yet I have never heard anyone speak well of its flavour or productiveness. At present there is no other standard for adjudicating prizes for Potatoes except appearance, and this accounts for many sterling varieties never being seen on the show-board. We hear of this or that Potato being a good exhibition variety, and why? Simply because it presents an attractive appearance, and to the worship of this, profitableness and quality are sacrificed. I am not sure whether there is a direct way out of the difficulty, but growers can soon find out the sorts that are profitable; the worn-out, inferior, and synonymous varieties being weeded out and only the best quality varieties grown.

G. H. H.

Finishing off late Tomatoes.—It is a good plan to grow late autumn batches of Tomatoes in pots, as when planted out they must remain where they are, whether the house is furnished with hot-water pipes or not. When in pots they can be removed with comparatively little trouble from one structure to another. In order to prevent cracking and to bring the fruit up to the best possible condition for sale, a little fire-heat from the present time onwards is imperative, also regular and very careful ventilation. Wholesale defoliation must not for a moment be entertained,

but partial curtailment of the leaves may safely be practised, also the pinching of all laterals. This will allow of a free circulation of fresh air and ingress for light and sunshine. Great care must be taken in watering. The early part of the day must be chosen, and rather than fill the atmosphere with moisture on a wet or foggy day, allow the pots to get dry. Patience is needed to allow the fruit to attain to its full colour, as semi-ripened fruit is certain to realise unsatisfactory prices. A good late, but a free setting Tomato is really worth any amount of pains, as after the middle of October prices invariably rise, that is, for really good fruit. A rather more than usual restricted root-run, manure-free soil, and exposure to every ray of light and sunshine are imperative if a free set, normal size, and good finish are to be secured. It is not always our Septembers are as sunny and dry as those of the last two seasons have been, and it is when this month is wet and unless that the evils of overfeeding and an unlimited root space are most apparent.—J. N. N.

CROPPING SMALL KITCHEN GARDENS.

MANY having large kitchen gardens have no idea of the trouble and anxiety inseparable from the task of supplying even an average establishment from perhaps an acre or an acre and a half of ground. There are far too many such instances, the case being worse still when such permanent fruits as Strawberries, Raspberries, and Gooseberries have also to be accommodated. Much may be done, however, by a little forethought. Of course, it is useless to talk of spare plots in such gardens being rested and turned up roughly for exposure to the weather. One crop must follow another as quickly as possible. In such gardens the dwarf kinds of Peas should always be grown, as they do not obstruct the light from other crops and various dwarf vegetables may be grown between the rows. For instance, between such varieties as *Chelsea Gem* and *William Hurst* occupying the earliest borders at from 3½ feet to 4 feet apart may be planted early dwarf Cauliflowers, protected in frames through the winter or raised in heat in spring. The best of Spinach may also be secured from the same position. Where more than one row of second early and successional varieties is grown side by side, the same course may be adopted. Perhaps, however, a row here and there at a considerable distance apart is the best, such sorts as *Stratagem*, *Fillbasket*, and *Wordsley Wonder* being adhered to. All that is then needed is just sufficient walking room between the rows of Peas and the other vegetables to allow of picking. The same remark applies to *Runner Beans*, which in such gardens should be supported by ordinary brashy Pea sticks, the haulm being pinched when the summit is reached.

The great point to be observed in growing one kind of vegetable between others is equality of growth, especially as regards height. The short to medium-haulmed Potatoes should be grown, there being many of such character very free-yielding and of good quality. If these are say 2½ feet apart in the rows, various green crops, such as autumn Cauliflowers and winter Broccoli, Kales and even Brussels Sprouts, may be planted between without fear of being smothered. I would not, however, advise the planting of many midwinter and spring Broccoli in these small gardens, as they so often succumb in severe weather, and the loss can be ill-afforded. A winter vegetable the importance of which I would strongly impress upon the owners and managers of small gardens is the hardy little *Rosette Colewort*. I regard it as indispensable, as, being compact in growth, the plants may be given as little as 15 inches

from each other. The thing is to sow the seed at the right date. So many, especially amateurs, make a mistake here. From July 7 to 21, according to locality, is a safe time for securing plants that will heart in in rotation throughout November and January. As for their quality, when grown on fairly good ground no winter vegetable surpasses them. They may follow Strawberries, second early Potatoes, Tripoli Onions, or indeed any crop which is cleared off the ground about the middle of August, at which date the young plants should be fit for transplanting. They do not require newly-dug ground, so that planting may take place between rows of spring-sown Onions approaching ripeness. Indeed, no better site can be chosen provided the Onions are sown in rows from 18 inches to 2 feet apart. The extra space is beneficial to the Onions, and more

stump-rooted forms of Carrots and small varieties of Beetroot. Another point of paramount importance is not to confine oneself to one variety of such uncertain things as Cabbage, but to have several strings to the bow—a row or two of each sort. B. S. N.

VEGETABLE REFUSE FOR PEAS.

It is amusing to read such notes as that by "J. C. B." on p. 337, where at one end he recommends the use of vegetable refuse and no manure, and at the other two lots of manure, one in November, the other in spring. No better friend to the gardener exists than good farmyard manure, and to think that by using the refuse of the crops one year we can grow a good crop the next is ridiculous. We have all met the gardener with some brilliant notion to revolutionise gardening and may have been impressed by his theories for

of it, and a dressing of vegetable refuse or even nothing would do it an immense amount of good, but to think that the fertility of the soil can be kept up out of the refuse of the crops that grow upon it is another matter altogether. Every bit of woody matter and all prunings from trees, stumps of Brassicas, and every other class of refuse that is useless to dig in I char, and keep another heap of vegetable matter, leaf-mould, odds and ends of compost and lawn sweepings. This I find of great value both in the kitchen garden and the flower garden, but I have never been able to keep up the fertility of the soil by its use as the gardener "J. C. B." speaks of has done. H. R.

NOTES ON TOMATOES.

I consider for early work and general use Conference and Conqueror to be two of the very best; in fact, I have discarded many others for them. They are free setting and give fine fruit. I consider Ham Green Favourite the best for outdoor and late autumn work. Conqueror has been very good all this spring. Ladybird also is very good for this purpose, and so satisfied have I been with these that I have not tried any new ones this year. Green Gage is liked fresh for eating. I certainly consider the Tomato a vegetable, being used for cooking with seasoning, not sugar, and also classed with other vegetables in pickles, &c.—H. ELLIOTT, *The Wilderness, Sevenoaks, Kent.*

The best Tomato is The Cropper. I have never seen anything to equal it for cropping, and the flavour is splendid. The above and Ham Green are, I consider, the best in commerce. The best outdoor kind is Cherry Ripe, and the best for winter and early spring crops is, I find, Frogmore Selected. I should say that a Tomato is a fruit, although it is admitted as a vegetable at horticultural shows. Still, I think it has more claim to be called a fruit, as it can be served up as dessert.—H. SANDWICH, JUN., *Calder Abbey, Calder Bridge.*

The best Tomatoes are Ham Green Favourite and Chemin Rouge. Earliest of All is the best for outdoor culture and also for winter and early spring crops. I consider the Tomato a vegetable. I can appreciate a Tomato cooked in various ways or raw as a salad, but I am not of sufficiently educated taste to take it as a fruit, neither do I know anyone who, after a good dinner, would eat a Tomato by way of dessert.—J. CLEARE, *Toddington, Winchcombe, R.S.O., Gloucester.*

There are far too many Tomatoes even to satisfy the largest cultivator. I always make a stand by older, well-tried kinds and give the newer sorts a trial by their side. If then they surpass in merit the older favourites in every point, then their position is assured. Some of the older kinds are difficult, however, to surpass. This much must be said of Tomatoes, that there is no uniform result attending the varied conditions under which they are grown. Were it so, then it would be an easy matter to say which are the best or the worst. I am no advocate for binding oneself to one or two sorts, even when grown in small numbers, simply for the reasons previously mentioned, and there is always interest to be found in variety. Frogmore Selected I have grown now for several seasons, and for general purposes there are not many others that can surpass it. I have had the heaviest crop of this, which furnished the roof of one small house, grown in pots, that I have yet seen. They were simply a rope of fruit from the base to their points and the individual fruits of uniform size throughout. Ham Green is a very similar variety and is one I grow largely. Its fruits are not of the exhibition type, but large enough for any other purpose. The Cropper and Champion are two of my newest additions; the former is the better of the two in weight of crop, but the latter has a particularly nice flavour. The former justifies its name, and has fruits of medium size and good in colour. For indoor culture Duke of York completes my list. Not being in favour as dessert



The Pomegranate (*Punica Granatum*) at Gunnersbury House. (See p. 373.)

profitable even in small gardens than crowding the rows, as much finer, heavier, better ripened bulbs are secured. Where it is the rule to destroy one Strawberry bed every year—and it pays to do so even in small gardens—no root-run is more favourable to the growth of Coleworts than the hard moisture-retaining Strawberry plot, and the ground has not to lie idle. One sometimes sees the throwing out of Celery trenches early in the summer advised, and in small gardens it is of the utmost importance, as the intervening ridges can then be used for a variety of subjects until the final earthing up is given. Cauliflower, Cabbage, and Lettuces all do well on the ridges, and no position suits dwarf Beans better, as the plants reap the full benefit of sun and air. Onions may also be so grown. Where the ground has to be cropped so continuously, it is wisest to grow the short or

a time, but there comes a time when his argument fails, and gardening as a whole is left in much the same position as he found it. Again, "J. C. B." in the first part of his article agrees with the gardener in question in placing the vegetable refuse in the bottom of the trench, while in the latter he sides with the farmer who keeps his manure near the surface so that the young plants feel the benefit of the manure from the start. Would it not be a better plan than either to dig the Pea quarters deeply in autumn in the old way and dig in whatever manure could be spared for this important crop as well as any vegetable or charred refuse to hand? I have just finished the preparation of the ground for midseason Peas—that for early varieties is occupied with Endive and July-sown Carrots—and have treated it as liberally as I can with regard to manure.

I can quite understand that gardens where manure has been dug in year after year get sick

here now, the yellow varieties are not given a place, but Sunbeam and Golden Jubilee have been proved to be first-rate. It is curious that they are not more in favour with lovers of the fruit in a raw state. The best kinds I have proved for walls are Early Ruby, Eckford's Prolific and Sutton's A 1. Hathaway's Excelsior is an excellent one for the open border, as also is Sutton's Maincrop. Ham Green and Frogmore Selected are hard to beat for winter and early spring supplies. Of the latter I get full crops from pots in a moist forcing house in spring. The Tomato I consider strictly a fruit and not a vegetable, although it is eligible in vegetable classes. All the same, I cannot reconcile it classed as a vegetable pure and simple. It is a point that has long been contested, some claiming that Tomatoes are both a fruit and a vegetable, while others disagree with such a decision. Staged among choice fruits at a flower show they weaken the whole; associated with vegetables, quality and general appearance are distinctly enhanced. This comes from no fault of the fruit itself, but from the prevailing fashion and from an undecided point in their original cultivation as to whether their associates should be fruits or vegetables. The point could not apparently be decided then: it is rendered more difficult now.—W. STRUGNELL, *Rood Ashton Gardens, Trowbridge*.

— I have not tried many of the varieties in commerce, but for several years have had a small collection, and have come to the conclusion that Ham Green, Earliest of All, Polegate, and Duke of York are the four best. All the above varieties I grow out of doors. Polegate and Duke of York produce larger clusters and finer fruit than the other two kinds. Ham Green and Earliest of All I use for early spring and winter use, as they set more freely than the others. Although when speaking of a Tomato we say fruit, yet I consider it a vegetable.—HERBERT NOBLE, *The Gardens, Ashton Court, Clifton, Bristol*.

— The Tomatoes I usually grow are Acme, Frogmore Selected, Ladybird, Hackwood Park Prolific, and the old Large Red. Outdoor Tomatoes are not grown here, as we are rather too far north for them to do well out of doors. For winter and early spring work I consider Ladybird and Frogmore Selected about the best. I never could see how the Tomato came to be classed as a vegetable. My opinion is that it would be better to give it a place among fruits. Of course, this question has two sides to it, and is very much a matter of opinion.—D. MELVILLE, *Dunrobin Castle Gardens*.

— A few years ago I used to grow a few varieties, including some of the newer ones, and found Challenger one of the best, so for the last year or two I have only grown it. I only grow Tomatoes under glass. It is of no use trying them out of doors in East Aberdeenshire; our winters are too cold and days too short to permit growing them even under glass.—J. FORREST, *Haddo House Gardens, Aberdeen, N.B.*

— I confine myself to two sorts, namely, Hackwood Park and Challenger. I have grown several other sorts under the same conditions, but found the two named to be the best setters and even-shaped fruit, the flavour also satisfactory. I think the manure they are fed with has a great deal to do with the flavour. When wanted for outdoors the plants must be well forwarded under glass. Ham Green will do well. Laxton's Open Air is a free setter, but comes too rough to be pleasing. I have seen Perfection do well outside. I prefer Hackwood Park for winter and spring crops. It is difficult to say which is the best, as so much depends on the culture at this time. I get fairly good results from this sort. In speaking of the Tomato we always speak of it as a fruit, and when shown it is generally as a vegetable. I think it should be called a fruit, as it can be eaten like an Apple or Peach, and its bright appearance seems to justify its being called a fruit.—CHARLES LACEY, *The Gardens, Burnhope-side Hall, Lanchester, Durham*.

— I try most of the varieties, and I cannot find any to beat Frogmore Selected, Ham Green

Favourite, Perfection, and Challenger for all purposes. The two best for indoor work are Frogmore Selected and Perfection. I always consider the Tomato a vegetable.—S. J. RICHARDS, *Mount Edgcumbe, Plymouth*.

— The varieties I prefer for inside culture are Polegate, one of the best Tomatoes yet raised; Duke of York, and a good type of Perfection. These are, in my opinion, three of the best, taking into consideration appearance, flavour, and freedom of setting. Golden Jubilee is a grand yellow, of exquisite flavour and of fine appearance. Carter's Outdoor is far and away the best I have tried for outside; it is most prolific, of good flavour, and extremely early. Earliest of All is a splendid winter and early spring Tomato. I consider the Tomato should be classed as a vegetable.—EDWIN BECKETT, *Aldenhurst House, Elstree*.

— The best flavoured Tomato I know is one I have grown here for some years. It was selected from Hathaway's Excelsior. For general purposes I grow my own selections of Challenger and Frogmore Prolific. When I choose one to propagate from, I generally use cuttings in the first place, then I get what I actually require, which is not always the case when saving seed from a selected fruit. On a low wall facing south I have had a fine crop of fruit. In addition to the two last named I have Hackwood Park and a variety named Laxton's Open-air. The latter is a capital outdoor kind. In my opinion, no one can expect to get Tomatoes fit to eat unless grown against a wall or up the roof, the same as Vines are grown. Fruit produced by plants grown together in great masses are only an apology for Tomatoes when compared with the real thing.—H. J. CLAYTON, *Grimston Park, Tadcaster*.

— I find Duke of York, Ham Green Favourite, and Frogmore Selected the best Tomatoes for indoor culture, the three being very free-setting, of good shape and flavour, and less liable to succumb to disease than many of the other varieties. In favourable seasons the above-mentioned do very well outside. The Tomato that I would recommend for outside is Up-to-date, which sets freely. For winter and early spring work I would strongly recommend Earliest of All. My opinion is that the Tomato should be classed as a vegetable, as one very seldom sees it dished up as dessert.—C. ALLEN, *Worth Park Gardens, Crawley*.

— I consider Early Ruby, Hackwood Park, Prolific, and Hathaway's Excelsior the best, being heavy croppers and of excellent flavour. The best outdoor kind here is Early Ruby. The Tomato is a fruit used as a vegetable.—A. BLACK, *Carton Gardens, Maynooth, Kildare*.

— With the many varieties of Tomatoes now in cultivation, it is somewhat doubtful if any two persons would make the same selection of, say, one half-dozen. I have found the following as good as any: For early winter work, Early Ruby and Frogmore Selected, and for a general crop Chemin Rouge and a good selection of Ham Green Favourite. For outside, Early Ruby is, I find, the best. As to a Tomato being a fruit or a vegetable, it evidently holds the distinction of being both fruit and vegetable, but it will be some years before it is generally recognised as a dessert fruit. At the present time its proper place seems the salad bowl or the kitchen, although at times it may be seen staged amongst a collection of fruit. I was judging a few days back when I noticed a dish in a collection of eight kinds of fruit. But I do not think many gardeners would admit the Tomato in a collection if they had any of the usual kinds of fruit in a presentable condition.—J. LEE, *Gopsall Hall, Leicester*.

— I consider Challenger and Perfection still hold a foremost place as regards setting and flavour. Frogmore Selected and Swinton Park, new varieties of late years, are also good croppers, the flavour being all that can be desired. When true seed can be obtained of the old variety Comet, this, from a marketing point of view, is hard to beat. For outdoor culture, Comet, Large Red, and the Dwarf Orangefield give good results, either planted out or in pots against a south wall.

For winter and early spring supplies I have seen nothing to beat the Large Red. The Tomato, though classed as a vegetable and shown as such, should, by its habit of growth and handsome appearance, be entitled to what it is by right (botanically), a fruit.—J. HILSON, *Naworth Castle, Carlisle*.

— Varieties of Tomatoes cultivated here are a half-dozen, and the supply from May onwards is kept up from sowings made in January and about the middle of March. I have discontinued growing plants for fruiting in the winter. The varieties are Early Ruby, Conference, Perfection, Hackwood Park, Ham Green Favourite, and Frogmore Prolific. Early Ruby is included only for its earliness. It is not considered of such good flavour as any of the others, especially the two last named. Having room to grow sufficient Tomatoes indoors in a house devoted earlier in the year to Strawberries, I do not cultivate any great quantity outside, but Frogmore Prolific does well on walls confined to single stems, as also does Perfection. In another part of this county where Tomatoes are extensively grown tied to stakes in the open, Earliest of All crops heavily, and in parts of Worcestershire a variety called Evesham Early is much favoured. These have not yet been grown in this garden, but certainly appear to be good ones for outdoors. Although botanically a fruit, the Tomato is here used as a salad or cooked in some way as a vegetable.—J. GARRETT, *Batsford Park, Moreton-in-Marsh*.

— If I were limited to one variety I should certainly select Austin's Eclipse as being the most productive and equal in flavour to any other variety. For main crop I usually grow Eclipse, Frogmore Selected, Comet, Hackwood Park, Perfection and Dicksons' Monarch. For outdoor culture none do so well here as Laxton's Open-air, which crops splendidly, some ripening on the plants, the rest being cut at the end of October and hung up in a warm vinery, where they ripen well and keep us supplied with nice Tomatoes till Christmas. Though the variety is slightly corrugated in shape, it grows to a large size. I cut last year several of this variety outside quite ripe weighing from 12 ozs. to 14 ozs. each, and the crop was far heavier than anything I had inside. I grew Eclipse and Frogmore Selected for early use this year, having them ripe the end of May. Frogmore was earliest, but Eclipse had double the crop and keeps better, being firmer, and also resists disease better, being of vigorous constitution. I usually speak of a Tomato as a fruit, not in the literal sense, but meaning the fruit of the plant, as I consider it to be a vegetable. Could this question not be decided?—W. WRIGHT, *Taymouth Castle Gardens, Aberfeldy, N.B.*

— The best Tomatoes are, I consider, Early Ruby for a first crop, Perfection main and mid-season, and Trophy for late crop. Frogmore Selected, I find, is the best for winter and early spring. In the true sense of the word, I should consider the Tomato a vegetable.—J. RAINBOW, *Broughton Hall, Skipton-in-Craven, Yorks*.

— I find Polegate and Ham Green the best for general purposes, with Ladybird for winter and spring crops. Earliest of All is the best for outdoors. I consider the Tomato a fruit.—CHAS. DEANE, *Cassibury Gardens, Watford, Herts*.

— My favourite Tomatoes are Conference, Challenger, and Ham Green. The last I consider one of the best both as regards cropping and flavour. For an outdoor crop nothing does so well as the Old Red. Conference does well for an early crop in pots. I consider the Tomato a fruit.—WM. ANDREWS, *Trigothnan, Cornwall*.

— The best Tomatoes I grow indoors are Duke of York, Challenger, and Ham Green, three good and free-setting varieties. The best outdoor Tomatoes I find are Early Ruby, the Old Red, and Dwarf Orangefield. I consider the Tomato a vegetable.—W. DRIVER, *Longford House, Minchinhampton*.

— I have grown several varieties of these, but find Ham Green, Frogmore Prolific, Comet, and Hackwood Park reliable kinds to grow.

Earliest of All and Up-to-date are two good varieties for ripening out of doors, especially when strong plants raised either in frames or houses are planted out. *Chemin Rouge* is a free setter for winter and early crops. As to the Tomato being a fruit, I should not class it as such, but consider the seedsmen are right in cataloguing it in their list of vegetables and salads, for which it is used. I am pleased you are asking this question, as there is some doubt when it is exhibited in a collection of fruit whether it is admissible or not. I should never stage the Tomato in a collection of fruit or exhibit it as such.—A. CHAPMAN, *Westonbirt, Tethury*.

—The best Tomatoes I find are *Frogmore Prolific* and *Viceroy*. *Viceroy*, a type of the old *Perfection*, but a freer-setting and heavier-cropping kind, is the best for outdoors and also for winter and early spring culture. I consider the Tomato a vegetable. No doubt it is both fruit and vegetable. I would like to see this question settled. It should not be exhibited both in fruit and vegetable classes, and I think the Royal Horticultural Society should settle this question.—JOHN LAMBERT, *Powis Castle Gardens, Welshpool*.

—I have grown a good many Tomatoes, and think the following the best: For early, *Dunedin Favourite* and *Trophy*; for summer and autumn, *Invincible*, *Perfection*, and *Hackwood Park*. I consider the Tomato a fruit.—J. SIMPSON, *Hurworth Grange, Darlington*.

—I find *All the Year Round* by far the best I have grown, taking into consideration freedom of setting and flavour. The best kind for winter and early crops is *All the Year Round*. I should consider the Tomato more a fruit than a vegetable.—T. SPENCER, *Goodrich Court, Hereford*.

—All things considered, there is no variety to surpass and but few to equal *The Cropper*, a variety raised by Mr. H. J. Jones and sent out by Messrs. Cutbush and Son. It is a moderately strong grower, very free setting, the fruit of medium size, *Ham Green* type, the colour good, and quality excellent. The *Comet* is also a good Tomato, but *The Champion*, the result of a cross between *The Cropper* and *Perfection*, is superior to it in point of weight of crop. In both instances the fruit is flat, round, very slightly corrugated, bright red in colour, firm, travelling well, and the quality good. *Early Ruby* is still the best open-air variety, that is for growing quite in the open. It is dwarf, the lower fruit nearly resting on the ground, free-setting, early ripening, not prone to cracking, and the quality is fairly good. *Carter's Outdoor* is a tremendous cropper, ripening early, not cracking, but the fruits are somewhat coarse. Against walls *The Cropper*, *Comet*, and *Sutton's A I* have done well. In point of cropping, form of fruit, and in particular flavour, no variety grown against walls surpasses *Dedham Favourite*, but the colour is against it. For winter and early spring crops I have found none to equal *The Cropper*. The Tomato is undoubtedly a fruit. It cannot rightly be termed anything else. It is largely eaten by the working classes, and by many is preferred to an Apple. Tomatoes, however, are not popular, nor apparently gaining in popularity as dessert fruit, and must still be associated with salad vegetables.—W. IGGULDEN, *Frome*.

—I consider the newer varieties of Tomatoes are a great improvement on the older sorts so far as flavour, size, and symmetry are concerned, but doubt whether any of the newer kinds can surpass the older ones for heavy cropping. Since the introduction of the smooth, round fruits of the *Perfection* type the corrugated sorts have gone out of fashion, and, compared with twenty years ago, are but little grown now. I was at one time a large grower of these wrinkled kinds, and although long since discarded, I still remember the great crops of fruit that such varieties as *Large Red*, *Conqueror*, and *Orangefield* used to yield. Having once given them up, it would have been useless to think of reintroducing them even if I had wished to do so, for the superior appearance, quality, and flavour of the newer and rounder kinds proved irresistible, and the wrinkled sorts would not have

again been countenanced. Among the newer kinds we have some very fine croppers, of which *Frogmore Selected*, *Powley's Up-to-date*, *Hackwood Park*, and *Conference* are a few notable examples, but I maintain that they do not surpass the corrugated and older sorts in this particular, while many others do not equal them. Taken individually, some of the newer sorts show a great advance in point of size, but I do not care for large, bloated-looking fruits, and much prefer medium-sized specimens for general purposes. Coming to symmetry, here again there is an immense improvement, and present-day varieties are in every way infinitely superior to the wrinkled sorts that were in cultivation twenty or more years ago. As regards flavour, there is a decided advance, and many people who would not at one time eat fruits of the more acid and older sorts, greatly relish the newer and sweeter kinds that now find favour with most growers. To sum up, then, my answer to the first query is that, with the reservation as regards cropping powers, the newer sorts are greatly superior to the old. I am not so large a grower of outdoor Tomatoes as many, as it is only any open spaces there may be on the fruit walls that are utilised for the purpose. All the same, I have found none to fruit with greater freedom and to be so satisfactory as *Laxton's Open Air*, and it is, in my opinion, the best Tomato for outdoor cultivation. I do not grow Tomatoes through the winter months. However, I make a start as early as possible in the new year, so that there shall be a good supply for the spring months. For this purpose I used to grow *Orangefield*, but having had my attention drawn to a variety named *Early Prolific*, I then abandoned *Orangefield* in its favour after trial. It is a good one to set, and although not large, the fruits are, for so early a variety, very freely produced. The fruits are smooth, roundish in shape, of a bright red colour, and exceedingly well flavoured. These are grown in rather shallow boxes, and fed well as soon as a good set has been secured. Although used more often than not as a vegetable, the Tomato is to all intents and purposes a fruit.—A. WARD, *Stoke Edith*.

—A good selection of *Perfection* Tomato, under whatever name known, still ranks as one of the best varieties in cultivation. The *Polegate* selection is a fine one; so, too, is *Comet*, and *Duke of York*, if not furnishing such large fruits, is a heavy cropper. Of the oval shaped fruits, *Chemin Rouge*, *A I* and *Regina* are excellent, both for cropping and for general usefulness. Flavour is in Tomatoes a nominal element. The best of this quality is found in the new *Golden Peach*, *Golden Nugget* and the pretty red *Cherry-ripe*. But there is great room for flavour development in the Tomato, and to that end raisers should specially direct their energies. A fine outdoor variety is *Magnum Bonum*. Probably it is the heaviest cropper and generally the most satisfactory, with the exception that the fruits are much corrugated. The smooth fruits are most liked. For winter and early spring cropping no variety I have seen is so good as is the new *Winter Beauty*. It is dwarf, compact habited, sets freely, and produces fine handsome fruits—a good feature in any winter variety. Tomatoes are fruits to some who consume them only in a raw or uncooked state, and these are by far the greater number of Tomato consumers. Small and medium-sized fruits are not only pleasing as dessert fruits, but they are soft eating, pleasant to the palate, refreshing and most wholesome. To exclude them from collections of fruit at exhibitions is absurd. Only by those who consume Tomatoes cooked or as salad-ing can they be classed as vegetables. Because used to make sauce no more makes them vegetables than does using Apples for a similar purpose make them vegetables. Such is the nature of the Tomato and so varied its uses that we must continue to class it both as a fruit and a vegetable.—A. DEAN.

—*Ham Green Favourite* Tomato maintains its position here as the best Tomato, producing a heavy crop of delicious flavour and handsome

appearance. It is relied upon for a general crop. *Challenger*, *Duke of York*, *Frogmore Selected*, and *Ladybird* have been grown here, and are all excellent kinds. This season is my first trial with *Cestrian*. It proves an excellent bearer, with large crimson fruit entirely without sutures, and of good flavour. Tomatoes are not grown here as an outdoor crop, *Ham Green* and *Cestrian* occupying a space towards the front of a late *Peach* house. All the *Year Round* and *Ham Green* are grown for winter and early spring. The former produces large clusters of fruit and remains a long time fit for use: it is also a hardy variety, a consideration where economy with fuel is required. The Tomato may be as much a fruit as a Melon is, and in many establishments it is partaken of as a fruit, but I should consider it a vegetable, and not admissible in a collection of fruit for exhibition.—GEORGE PHILLIPS, *The Gardens, Wyastone Leys, Monmouth*.

—My favourite Tomato is *Conference*, grown from seed which I have selected year after year since the introduction of this once popular variety. It hits the happy medium as to size, is of fine quality, of good colour and shape, crops freely, and has the quality, so valuable to those who cannot grow winter Tomatoes under glass, of keeping better after being stored than any other variety I know. Of course, it has not the sensational size of *Duke of York* and some others, and that may account for its not being more grown. I like it both for indoor (early and late) and outdoor culture. This year I am trying *Up-to-date* for the first time, and am pleased with the result both as a cropper and from a flavour point of view. Of the yellow-fruited varieties I have not found one to equal *Golden Jubilee*, a really grand variety of excellent constitution, handsome shape, and splendid quality. The Tomato ought certainly to be classed as a fruit without making any absurd restrictions as to size or on any other point. If not often served as a dessert fruit, it often occupies the position of a fruit when plucked from the plant, and a most refreshing fruit at that. In Government and in market returns it is classed as a vegetable, and perhaps it is as well that this is so, for railway rates are high, and might be still higher under another classification. J. C. TALLACK, *Shipley Hall, near Derby*.

—I believe the newer varieties are better in flavour, but certainly not freer setters. I should pronounce for the new ones, nevertheless. I do not grow many outside. I like *Hackwood Park* the best. *Conference* or *Best of All* I find the best for autumn and early spring. Tomatoes, I should say, are now equally used for the dessert and for cooking. I am not in favour of classing the Tomato as a fruit, and think it should remain a vegetable.—W. J. NOVELL, *Cotton Hall, Burton-on-Trent*.

—The Tomato I mostly depend on for early and late forcing is *Ham Green*. I generally try any new sort of reputed as sent out. I get *Ham Green* from a true source, and cannot see any to beat it for cropping and quality. I like *Laxton's Open Air* for outdoor culture on walls, and yet I mostly grow *Ham Green* for that purpose as well. Properly speaking, I think the Tomato ought to be classed as a fruit.—T. ANDERSON, *Laleham House, Staines*.

—For some time I have confined myself to *Hathaway's Excelsior*, finding it to be a most reliable kind both for indoors and out. This year I am trying *Frogmore Selected*, and as far as I can see on outside walls there is little difference. I consider a Tomato a fruit. At the same time, I do not think it could be allowed in a collection of fruit for dessert.—H. W. MATHESON, *Addington*.

—I consider *Challenger* and *Chemin Rouge* the two best varieties for heavy cropping, good shaped fruit and good setters. *Frogmore Selected* is of better flavour for eating in a raw state, but it is not such a good cropper as the other two. I have grown *Golden Jubilee* and have found it a good cropper. It sets well, has good solid fruit, less acid than most varieties, which has made it a favourite with many for eating in a raw state, while others consider the flavour insipid with-

out the small amount of acid. The three varieties above do very well here on south walls, and I always train them with four shoots from each plant and they give heavy crops. But for training up sticks in the open Earliest of All and Laxton's Open Air are the heaviest and earliest croppers. Ladybird and Earliest of All are the best for autumn and spring use. I consider the Tomato a fruit, used mostly as a vegetable. At present it cannot be classed with ordinary fruits eaten as dessert.—J. LANSDELL, *Barkby Hall, nr. Leicester.*

— I still continue to grow Perfection under glass in preference to all others. For outdoor, early spring and winter crops I consider Up-to-date the most useful; it is rather small, but of excellent quality.—T. LOCKIE, *Huntingdon.*

— The best, I think, for exhibition are Polegate and Perfection, but for freedom of cropping and general purposes for inside and out, both winter and summer, I have found nothing to equal Comet. I have tried nearly all the sorts. Up-to-date did well outside this year. I should certainly class a Tomato as a vegetable.—J. BOWERMAN, *Hackwood Park, Basingstoke.*

— I rely upon Ham Green and Frogmore Selected for general crop, and they are hard to beat for all purposes. Conference and Duke of York are also good. Hathaway's Excelsior is with me the best outdoor kind. Ham Green is the most reliable kind grown here for winter and early spring crops. I consider the Tomato a fruit, although always shown and used as a vegetable.—W. NASH, *Badminton, Chippenham.*

— I consider Austin's Eclipse the best all-round Tomato that I have ever grown, good alike both for early and late crops. It is an abundant cropper and of excellent flavour. Stirling Castle and Comet are also good. I consider the Tomato a fruit.—W. HUTCHINSON, *Eastwood Park, Renfrew.*

— I consider Perfection and Sutton's Dessert the best Tomatoes for flavour and setting. Earliest of All is the best for winter and spring, and also for outdoors. I think the Tomato ought to be classed as a fruit.—J. G. GOODMAN, *Abney House, Bourne End.*

— The Tomato I grow principally is Eclipse, both indoors and outside. It is remarkably free and prolific. Another variety is Frogmore Selected, rather more hardy, but it does not ripen so quickly. The Tomato is a vegetable.—E. TROLLOPE, *Coombe Park, Whitechurch, Reading.*

— The best Tomatoes I have grown are Stirling Castle, Conference and Abundance. For cool unheated houses, I have found Ham Green suitable. I consider the Tomato a fruit.—EDWARD TATE, *Balcarras, Fife.*

— I consider Frogmore Selected the finest Tomato grown. It is a very free setter, of excellent flavour and equally good for winter and early spring crops; in fact I grow no other. I grow a few on a wall outside, but Tomatoes outdoors in these parts are not a success.—ARTHUR SMITH, *Edenhall, Langwithby, R.S.O., Cumberland.*

— Seeing that so many excellent varieties of Tomatoes are now on the market and seeing that so much depends on the locality (speaking of growing Tomatoes outside) it would be difficult if not impossible to name any one variety as being the best. Of the several varieties which I have grown here, both on walls and trellises, I find Challenger and Ham Green Favourite two of the most suitable kinds, both as regards free cropping and good flavour combined with a sturdy constitution. I do not, owing to want of room, grow many indoor varieties, but for early work I have a good opinion of Frogmore Selected. I think that the Tomato should be classed as a vegetable.—W. LUMSDEN, *Bloxholm Hall, Lincoln.*

Winter greens.—The present aspect of these is far better than was originally anticipated. I have been surprised to find how well Kales, Savoys, and Brussels Sprouts have come on in comparatively poor soils where water could not

be obtained, and plants once got in had to take their chance. No harm will have been done, and perhaps some good, if those who plant winter greens learn to get them out later rather than earlier, as whilst earliness may ensure stronger growth, it also promotes too early production. No one wants Kales and Savoys in before Christmas, and the present season is showing that those plants either got out late or greatly retarded in growth because of the drought will give of their heads or hearts after the new year comes in, and the later into the spring the better. Of course Brussels Sprouts may be earlier, as these, unlike other members of the Cabbage tribe, yield sprouts over several months. But plants that are very early, and as a rule very gross, produce gross sprouts for some time, until later, the stem becoming harder, the sprouts become also harder and smaller. Generally, stems that produce good hard and not large sprouts from the first of November onwards to the end of March are the most profitable and serviceable. Coleworts are much smaller than is usually the case, but these will be all the better for some two or three months' longer growth. With a continuance of open weather Autumn Giant Cauliflowers will continue to head in, and these just now are excellent; indeed, much sweeter and milder than were those cut in September. On the whole our winter green crop will not be a bad one.—A. D.

NOTES FROM SYON GARDENS.

No one would from choice select the end of September as a suitable period of the year to pay a surprise visit to Syon House Gardens, but even at that late date there remained much to interest those in quest of information, cultural or otherwise. To me the Peach trees on the open walls were a source of much interest, the extent both of variety and trees being considerable. Nowhere this season have I seen such clean and healthy trees, notwithstanding the tropical nature of the season and the lightness of the soil of which the garden is composed. Syringing and watering must have been closely followed up, and their general management was such that nothing short of the highest commendation seemed justified. The crop this season had not been so heavy as usual, but this is not to be wondered at when the garden is only about 17 feet above sea-level and in close proximity to lake, canal and river. The destructive frosts that were so universal at their flowering period must have been severe. One long stretch of south wall was filled with fine trees, as also was one with a west aspect. These latter replaced dessert Cherries that did not do well on this particular wall, though on cooler aspects they are a great success. Bush Peach trees planted on a south border some feet from the wall grow remarkably well, but Mr. Wythes contemplates removing them to a cooler site in order to make them later if possible in flower, and it is hoped safer from frost in spring. Some trees on a north aspect looked as happy as did others, and in not a single instance did any trace of blister appear, although there is no glass coping provided anywhere. The extent of the kitchen garden is 9 acres, and scattered over this large area are many hundreds of trees of all kinds. Apples and Pears are splendid examples of careful cultivation.

Besides these there are large quantities of Peaches and Figs in pots and permanently planted-out trees. Grapes have several large houses devoted to them, two or three of them being iron-roofed structures quite 30 feet in height, the borders being outside ones. As with other fruits, the demand for Grapes is heavy and continuous, 9 lbs. to 12 lbs. being required daily. Chrysanthemums fill several of the fruit houses and number some 1500, a large proportion of them being grown for specimen blooms. These looked remarkably well and I saw no sign of rust, which is a source of much complaint this year. A houseful of Cucumber plants (Syon House Prolific) was thickly hung with seed fruits almost ripe, and distinctly showed its prolific character. This is a

fine variety for winter fruiting. For every-day use in winter these are brought on in batches, mostly in pots, as also are Melons, for which Syon is also famous. At the end of September there were still many fruits in various stages of growth.

The large winter garden has recently undergone considerable internal modification, cumbrous stages having given place to a much more natural system of growing plants in beds, and the roof being draped with climbers. The central dome is filled with lofty Palms and a gigantic Bamboo some 40 feet in height. Three miles of hot-water pipes formerly served to heat this extensive winter garden, but a re-arrangement on more modern principles reduces this quantity by one-third, and, needless to say, with much more satisfactory results. To maintain a succession of decorative plants for these winter gardens needs considerable stock for periodical renewals. For the benefit of the young men in the bothy there is a good library, and in addition all the leading gardening papers are furnished weekly, so that every inducement is given for self-improvement. With 70 acres of grounds, 9 acres of kitchen garden, besides the glass, there is everywhere apparent the evidence of a master hand both in management and cultural skill. Walks, which have an extent measuring, I believe, five miles, are bright, free from weeds, and otherwise excellently kept. A combined steam lawn-mower and force pump makes the labour of mowing much more easy than hand work. In large gardens the steam mower should be a boon when thoroughly understood by the man in charge. In the height of summer when the demand is less for mowing it can be used most effectively for pumping water from the lake or other sources, and with hoses much good work can be done with a small expenditure of labour. From such a large area vegetables are forthcoming in proportionate quantity, but even at Syon the great and memorable drought had left its mark in the lateness of growth in many things planted. This is, of course, inevitable, particularly where the soil is light, as is the case here. Though September is not a month to choose to see Syon in its true aspect, many useful lessons may be learnt, and which in my case will not be soon forgotten. W. S.

GARDEN FLORA.

PLATE 1248.

NERINE MANSELLI.

(WITH A COLOURED PLATE.*)

PERHAPS it may interest some of your readers to know the origin of the Nerine figured to-day. In March, 1880, I purchased three seedling Nerine bulbs from Messrs. E. G. Henderson and Son, of St. John's Wood, under the names of *Nerine elegans*, *N. cinnabarina*, and *N. sanguinea*. *N. sanguinea* died; the other two did well and flowered. I was so charmed with the blooms of both these seedlings that I wrote to the person I understood was the raiser of these Nerines, viz., Mr. James O'Brien, when he was with Messrs. E. G. Henderson and Son. We had a long and interesting correspondence on the Nerine family, and I sent some of the blooms of Nerine Manselli to Mr. O'Brien, who afterwards sent them to Mr. G. Baker, of Kew, who thus wrote: "It is a fine plant, just about halfway between its parents, with a very broad fleshy leaf, and bright red, slightly irregular flowers. A decided acquisition to the series of garden forms." I sent some of the blooms of Nerine Manselli on December 18, 1887, to the Royal Horticultural Society, South Kensington, which were awarded a first-class certificate under the name of *Nerine Manselli*. As regards *Nerine elegans*, I have always cherished it. I con-

* Drawn for THE GARDEN by H. G. Moon. Lithographed and printed by Vincent Brooks, London.

Nov. 11, 1899.



NERINE MANSELLII.

sider that it ranks next to *N. Manselli*. It blooms rather earlier, but it is neither so free-flowering nor so vigorous. J. L. M.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

PEACH HOUSES.—Just at present there will be but very little to do among the Peach trees, except to carry out the routine work of pruning, cleaning, and re-tying, as recommended in former notes, getting this work out of hand as quickly as is consistent with good workmanship. Before tying the trees, any painting that woodwork or

the necessity for utilising all available space for the storage of winter-flowering plants, it is imperative in the case of early Peach houses and vineries that these should be cleared out, so as to allow a week or two of full exposure to whatever weather may come before the houses are again put to work. If the nights are frosty, so much the better, as a touch of frost appears to pave the way for a kindly start when the time comes. Early houses are frequently badly treated in this way, and suffer accordingly. Being the first to be cleared of leaves, choice naturally falls on them for housing Chrysanthemums and such like plants, which require all the light they can get, but these plants should be moved on into later houses as soon as room can be found for them. This should not now be a difficult matter, as many of the

stronger than do those which have their roots and tops in the same temperature from the start, and this enhanced strength shows itself right through to the time when the Grapes are setting, the bunches being more sturdy and the individual flowers likely to set more freely. Before surrounding the pots with a good quantity of fresh Oak or Beech leaves each pot should be set firmly on a pedestal of some kind, so that there shall be no sinking out of position later on. Allow a fair space between the pots and the front wall of the house, so that the benefits of the hot-bed may be felt all round and not only on one side of the pot. If the bottom-heat has to be supplied by hot-water pipes, see that the pots are kept some inches above or away from these and the intervening space filled in with spent tan or some such material that will tone down the dry heat, for when the bottoms of the pots are brought too near the pipes there is considerable danger of the soil and roots becoming too dry near the bottom. The bottom-heat, however generated, should be carefully watched, and it will be quite sufficient for some time to keep it to from 55° to 60°. More than this will be harmful until the Vines show signs of growing, after which, of course, it may rise proportionately with the rise of the top temperature. I advised above the use of leaves alone, and prefer them for Vines, which have to be started so gently, as there is less fear of the bed becoming too hot than when manure also is used. A deeper bed into which the pots may be sunk to their full depth can safely be made with leaves alone. When the pots are in position the rods should be tied to the trellis, either coiled or bent into such a position that the middle length of the rod will be most elevated, as this will assist the Vines to break regularly, a great point in pot Vine culture. Tie them in the simplest possible way so that there will be as little danger as possible of breaking the new growths when they are again re-tied into their proper position for growing. A night temperature of 50° will be quite sufficient to start with, and a high day temperature may be kept down in sunny weather by the admission of a little air; otherwise the house or pit may be kept close up to the time when the buds are seen to be on the move. Syringe the rods occasionally with warm water on bright days and preserve a fairly humid atmosphere by damping down when necessary. This should not, however, be overdone. Pot Vines which were placed in position as I advised some time ago will probably require some water, and even those which have been outside and protected from rain may be on the dry side, but this is a matter that must be governed by individual circumstances; and one can only say that during the first part of their forcing career pot Vines require very little water indeed provided other conditions are right. More especially is this so with those that are plunged in damp leaves, as these will gain sufficient moisture by absorption up to the time they start. When growth commences, a steady circulation of air must be given.

PINES.—Careful attention to the bottom-heat will now be necessary in Pine houses and pits, and where there are no bottom-heat pipes or an insufficiency of them, the Pine grower's lot is not a happy one during the winter months. The turning over of hotbeds, mixing in fresh material, re-plunging, &c., are not very desirable work, and are also a source of anxiety, from the fact that new or re-made beds are apt to get too hot. A bottom-heat of from 80° to 85° must be maintained for growing stock; those resting will put up with a few degrees less. Watering will be reduced to a minimum, but must not be altogether neglected with plants swelling their fruits or with those that have nearly reached fruiting size, but which it is advisable to keep from showing fruit for the time being. Lift plants which are ripening their fruits out of the plunging material and give them the lightest possible position at the warmest end of the house, as this will greatly improve the flavour of the fruit. If the young stock is at all overcrowded, it should



The sweet-scented *Verbena* (*Aloysia citriodora*) at Gunnersbury House.
(See p. 373.)

trellises may require should be done, and it is as well to remember that a coat of paint has another virtue besides that of preserving the woodwork, this being its destructive properties to insect life, and if only for this alone it would be true economy to paint oftener than is usual. Where there are many houses the work of re-tying has frequently to be left to inexperienced hands, and some instruction will be necessary, more especially in the matter of allowing plenty of room for the natural swelling of the wood, tight tying being one of the most common of errors. I like also to have a twist made in the matting after passing it round the wire and before bringing it round the shoot, this preventing the shoots coming into direct contact with the wire and tending to lessen gumming. Whatever may be

earliest flowered Chrysanthemums will be over, so that the plants may be cut down and stored in less space.

POT VINES.—Where these are grown as a relief to the planted-out Vines or for early work, it will be time to get them into position for a start, and they should be brought into the lightest pit available which has good heating accommodation. They may be started and well grown either with or without bottom-heat, but, personally, I much prefer a plunging bed, and consider it especially valuable in the very earliest stages, as a gentle bottom-heat will then bring the roots into active work, while the tops are kept dormant for a week or two by admitting plenty of air and keeping down the temperature of the pit in the meanwhile. Vines treated in this way break

be overhauled and the most unpromising plants thrown away.

LATE GRAPES.—To keep ripe Grapes hanging on the Vines at this time of the year one must be prepared to go over them with the scissors frequently, removing every berry which shows any sign of decay. Fortunately, most of the Grapes grown for the winter season are thick-skinned and keep pretty well, but they give some trouble through the November fogs and must not be neglected. A little fire-heat, with ventilation, should be given during the day, confining the ventilation to the top ventilators in damp or foggy weather, but at night artificial heat will not be advisable except to exclude frost, it being far better to confine the drying-up process to the daytime.

CORNUBIAN.

KITCHEN GARDEN.

ASPARAGUS BEDS.—In light, warm soils Asparagus beds are assuming a yellow aspect sooner this season than usual, and there will be no gain in postponing mowing or cutting the grass after that stage has been reached. In small gardens possessing only a limited number of beds, cutting the stems off with a strong knife is the best, as the scythe is apt to tear the stalks out and injure the crowns. Some still favour autumn or winter mulching even when the beds occupy a low-lying position and consist of a heavy, retentive soil. On this account beds often suddenly go wrong, and even die off entirely. At the same time, although not approving of heavy manurial coverings at this date, I think that the crowns and roots, many of the best of which lie near the surface, are benefited by a slight covering of some short littery material. For many years I spread old hotbed material over mine, first giving a liberal sprinkling of some approved fertiliser. This affords protection should the winter turn out severe, and on porous, well-drained soils the roots never get too much moisture. Some still think good Asparagus cannot be grown without the use of a good deal of salt, but my experience is that that is more imaginary than real, as some of the most noted growers never use salt at all. All the same, salt is a good weed eradicator, and a sprinkling may well be given as soon as all weeds and rubbish have been cleared off the beds and previous to any mulch being applied. Care is needed in raking the surface of the beds, as after a genial autumn young growths frequently spring up, which are easily snapped off. Those who contemplate making new beds should avoid elevating them to any great extent and having deep trenches between, especially on light, well-drained soils, as thus formed much of the necessary moisture drains away from the roots, while in heavy, retentive gardens the water drains into the trenches, and there often stops, to work mischief. Where any old beds are being forced, avoid planting in the same position, or at any rate the old material. Choose if possible an entirely new site, using the old plots for other vegetables. Excellent Peas, Beans, and Cauliflowers may be grown on old Asparagus beds, bush fruit also doing well.

SOWING EARLY PEAS.—It is, perhaps, full early for this operation in the southern parts of the country, but further north from the present to the 20th of the month is a good date to get in the seed of dwarf hardy sorts. Some ignore autumn sowings, but where the border is light and warm and the situation sheltered, a week or ten days may be gained by open-air sowings. Peas transplanted in spring, which have been brought on even in cold frames and exposed to all the air possible, are apt to suffer from snowstorms and cutting winds should such prevail immediately after transplanting; whereas November-sown batches acquire a hardy constitution and readily respond to finer weather and longer days in February. I have found the plan of sowing fairly shallow and slightly ridging the soil over the rows to be of benefit. Thus treated, decay is less likely to occur should a wet period set in just after sowing. Provided the ground is fairly rich, no manure need be added, as it is easy to err in this

respect, especially if the manure used is of a strong, rank nature. The latter encourages a growth which is easily affected by frost, basal decay being likewise liable to occur. If any is necessary, use old Mushroom manure, and if need be add to it a small percentage of some safe artificial manure. Any of the dwarf hardy varieties answer well for open-air autumn sowings. Let the distance between the rows be about the same as the height of the haulm, this admitting plenty of light and air to the roots and haulm in spring. As soon as growth is well through the ground, place a few small Yew branches on each side of the rows to shield from cutting winds. Those who have no facility for forcing Peas in early spring, but who have a spare cold pit or two, will find it profitable to sow now such sorts as William Hurst, Chelsea Gem, or others of the same type. These will afford a few useful gatherings a fortnight or three weeks before the earliest spring-sown border lots come in. Use soot and lime freely over the surface in winter if slugs attack them, as they frequently do at this dull, damp period should it be mild. Watch also for sparrows, or a raid by them of a few days' continuance will blast the cultivator's hopes. It is a good plan when sowing to sprinkle a little leaf-mould in the drills before covering them in. It assists root action.

VEGETABLES AND THE SEASON.—Many gardens of a shallow, poor nature suffered much through the long absence of rain during the time winter vegetables were making their growth. On the other hand, where the soil was fairly rich and moisture-retaining, such crops as Brussels Sprouts, Broccoli and Kales made firm, good growth, and sprouts are now medium-sized and firm. Beet suffered much in some districts; several large market breadths which I saw were lying prostrate by reason of the drought. Large Beet is not wanted and is almost unsaleable, people preferring nice shaped smallish roots, these being, as a rule, much better flavoured and more suitable for slicing up. Dell's is still highly thought of, and it is undoubtedly a good all-round variety, but I prefer Veitch's Selected Red, a fine-shaped, richly coloured, good-flavoured Beet and just the thing for the dining-room. Green vegetables which have made a fair growth should be able to withstand a good amount of frost should such occur, which they will not do when growth is gross and soft.

J. C.

CHRYSANTHEMUMS.

THE DECLINE OF THE INCURVED CHRYSANTHEMUM.

THAT the prim and shapely Chinese type of Chrysanthemums so popular among older growers is on the wane one can see on all sides, and were it not for the substantial prizes offered for them at exhibitions the overshadowing merits of the Japanese forms would soon quite kill them. Much as one may admire their perfect ball-like shape, there is no getting away from the fact that they require a large amount of skill to produce them, and when they are produced, still more patience is needed in manipulating their florets to obtain that desirable shape. They are less showy on the plants than are the Japanese varieties, which now include every conceivable form, and are therefore less handsome for all kinds of decoration. The public takes but a languid interest in the class which has always been wanting in variety of colour. Take away the whites and the varying shades of yellow, and there is little left. Somehow, too, of late years really fine specimens have been rare. They will not respond to the high culture, as it is called, that is practised in the case of the Japanese kinds, and many growers for that reason are giving them up. It seems like ancient history to think of "Queens" so long regarded the ideals of the incurved type. Since they were seen so fine, varieties which are really bad forms of the Japanese are the leading ones. The flat and rounded floret has given way to those of any shape, so that the whole shall produce something

globular shaped. One by one the classes of Chrysanthemums go. At first the reflexed, then the Anemone-flowered, till by and by there will be but one family left. The neat little pompons will undoubtedly find favour for a long time to come for cutting; so, too, will the singles, but for exhibiting as specimen flowers there will be nothing left but the Japanese. We should deprecate any division of these whether shown in the usual way on boards or in more imposing vases. It is their variety of form added to their many colours that give them their beauty when placed together.

The loss of the incurved kinds, then, will not be felt, and I should not be disposed to offer prizes for them. That their exhibition is brought about by a certain amount of artificial means in the way of arranging the florets is pretty well known, and tends to deter would-be cultivators of Chrysanthemums from taking them up because of this dread of "curling." I do not care to foster the growth of all forms or classes of this particular flower because such have once been popular, but rather do everything to extend the culture of the best. Who, for instance, wants the lumpy show Dahlia now that we have the Cactus type, so much more elegant and in every way more useful? Why grow the somewhat delicate and few-petalled bizarre Carnation when fancy, coloured and self kinds may be obtained with little trouble out of doors in the open ground—full, fine, handsome blooms in rich profusion? Let the Chinese Chrysanthemum go like many another fashion in flowers. It will only live in the memory of those who, like myself, have spent no end of time in trying to make it presentable for exhibition.

GROWER.

Chrysanthemum Australian Gold.—I was much struck with the beauty of this variety when it was first introduced, but seldom since have I seen it so good as then. I met with it, however, in perfect form the other day among more kinds that had been cultivated with anything but pretensions to exhibit. It is an informal pyramid of light yellow, the florets being placed in charming lace-like arrangement. Probably the cause of failure with this kind is that it is generally overgrown.—S.

Chrysanthemum Cullingfordi.—One of the oldest of Chrysanthemums, this is also one of the best for growing in bush form, its bright and effective colour as well as its good habit being in its favour. In common with several others of the reflexed class, the flower-stems are weak and the blossoms do not always hold up their heads so well as one could wish. Besides being useful for growing in bush form, Cullingfordi is very suitable for striking late and growing on in small pots. The blossoms in this case are small, and therefore stand up better, but they are wonderfully bright, and come in well for late decoration in the conservatory.

Chrysanthemum rust.—This pest is making sad havoc again in this neighbourhood, and out of many collections visited I have not found one entirely free. In my own case there was no sign of rust until the plants were housed, though I had looked carefully for it, but as soon as they came under glass the little brown spots began to appear, and are now plentiful in spite of all I can do to stop them. I had hoped until the plants were housed that I had stamped it out by frequent applications of sulphide to the cuttings before they were removed from the old plants and also after they were rooted and potted up. I am now having every leaf that is affected sponged, but it is not to be checked in this way.—SUFFOLK.

Chrysanthemum Marie Calvat.—This Japanese variety, of continental origin has now been in cultivation long enough to determine its merits, and those growers who hurriedly discarded it because of its roughness from an early bud selection may now be interested to learn that blooms of exceptional size and high quality are finishing well. To arrive at this result the plants were stopped towards the end of April, and the

strongest succeeding individual shoots grown on strongly. In the course of time this shoot made a natural break, from which three shoots were taken up. These in turn ultimately produced crown buds (second crowns), from which really handsome blooms are now in the pink of condition. The colour is a soft rose and the petals are long and broad. The habit also is dwarf and the constitution robust.—D. B. C.

CHRYSANTHEMUMS AT SWANLEY.

THE annual display of Chrysanthemums provided by Messrs. Henry Cannell and Sons is always of exceptional merit, and this year's is no exception. The plants are housed in a large span-roofed glass structure admirably adapted to show them off to the best advantage. The collection, always up-to-date, comprises everything that is newest and best. Japanese are almost wholly now-a-days the feature at the trade displays, other varieties being mainly kept for stock and not contributing so much towards the general effect. This year Messrs. Cannell have varieties from home, colonial, continental, and American raisers, but these last are considerably in the minority. Most of the plants besides being well flowered are dwarf in growth, presenting a striking contrast to some of those we used to see years ago.

Dealing first with varieties of continental origin, M. Ernest Calvat claims first attention as being still the foremost cultivator in his country. Fairly well-known varieties from this raiser which appear again in good form this year are M. Fatzer, a grand incurving Japanese, very close and compact, and the colour tawny yellow; Marie Calvat, white, flushed purple, is big, but not attractive; Mme. Ferlat is fine in form and very pure in colour. Others, such as Mme. Couvart (de Terrail, Souvenir de Molines, Mme. Carnot, Werther, Le Grand Dragon (very large), Mme. G. Bruant (white, flushed purple), and N.C.S. Jubilee, need no description. Some of M. Calvat's newest flowers are President Lemaire, velvety crimson and gold, and Mme. Lucie Recoura, something after the build of Pride of Madford, and not unlike it in colour. Zephoris is a promising golden yellow Japanese, with flat, pointed florets, but Soleil de Decembre, of the same colour, seems to be too early to justify its name; M. H. Martinet is a big crimson and gold variety, and also of this year's set is Mme. Aristide Rey, a Japanese with broad florets, colour rosy amaranth, with reverse of silver. Eliane, golden yellow, and Lydia, a rosy amaranth, with a silvery pink reverse, are also quite new.

Some very promising novelties are on view from M. Nonin, whose name has only become familiar to English growers during the past three years, and several other continental raisers were also well represented. We noticed especially Amateur J. Lechapuis, a huge crimson and gold Japanese; M. Raymond Desforests, reddish velvety crimson, with deep golden yellow reverse; Soleil de Lyon, golden yellow; Mme. F. Daupias, pure white; Mme. Alphonse Rodière, President Dutrail, terra-cotta and gold; M. Gatellier, dull terra-cotta, and reverse of straw-yellow; Cornua, very fine pale blush-pink in the style of Lady Isabel; and Jules Bernard, a velvety, rich rosy amaranth with silvery pink reverse. Colonial varieties, which were so interesting last season, are keeping up their reputation again this year, and of these one of the most popular, viz., Nellie Pockett, is quite as good this year as last. Pride of Madford, Australia, Mr. T. Carrington, and Purple Emperor are well-known colonial varieties. Not quite so old, but seen in good form last season, are S. R. Upton, a fine yellow, and Miss Mary Underhay, a pretty shade of straw-yellow. Newer forms are to be found in Sydney Brunning, a large bloom of the Japanese type, colour deep reddish terra cotta with golden reverse; Marjory, bright rosy pink; Hector Brunning, dark crimson, with golden reverse; and Sir H. H. Kitchener, bright reddish crimson, reverse old gold. Mrs. Frank Gray Smith, deep

golden yellow, is another of these colonial newcomers, as is also Admiral, a white Japanese, not unlike the old variety Avalanche. Miss Poppy Brunning is very large and of a peculiar shade of colour, the inside being a dull buff-pink with a straw ground.

In whites Mutual Friend was large, Queen of Portugal being another. Pale yellows were well represented by an attractive batch of Mrs. W. Mease, and a very fine display was made by a number of plants bearing large blooms of the pale blush-pink Mrs. S. C. Probyn. Kathleen Rogers is also a large fine white. In the incurved section, which is not largely grown for the purpose of making a display, we might mention Globe d'Or, fine in colour, and Triomphe d'Eve. White Yvonne Desblancs also belongs to the same section.

OCTOBER CHRYSANTHEMUMS.

THERE is not an over supply of varieties that are at their best in October. Many by retaining early-formed flower-buds are made to produce blooms in that month, but they are usually of bad colour and ragged in shape. Some of the so-called outdoor sorts are really October ones, which if left outside run the risk of being cut off by frost ere they are in full bloom. These early autumn sorts are well worth growing in pots, as they provide a rich display of colour, although they will not, as a rule, respond to the disbud-ding so freely followed for the production of big blooms. At the present time we have Albert Chauson, orange, shaded red; Clinton Chalfont, bright yellow; Emily Silsbury, white; Gas-pard Bouchard, bright bronzy red; Gladys Roul, white; Lady Selborne and its yellow form; Margot, salmon-pink; and O. J. Quintas, light pink. Queen of the Earlies and Yellow Queen of the Earlies are two really charming kinds at this season. Source d'Or has a bronzy shade quite its own, and Wm. Holmes is an old sort not beaten in its way. Soleil d'Octobre is a good yellow which blooms early, and one that may be thinned to get large flowers. General Paque, too, produces large blooms in October. This is a good new kind, a bright bronzy yellow in colour. Mutual Friend is a fine white variety, generally at its best early in the autumn. Mlle. Lacroix, white, with its sport of a pink shade, and Annie Clibran form a useful pair to grow for early blooms. Elaine, a favourite white kind, is still noted for its purity of colour, although it has been cultivated so long. Lady Byron, white, and Lady Ridgway, salmon-buff, are now at their best, and will be past by November. Rycroft Scarlet is dwarf and free, and highly recommended for October flowers. Edith Tabor, clear yellow, is now in full bloom. This produces fine blooms, but the plant is of rather ungainly habit. Mme. G. Bruant, white, tinted rose, is a full, well-shaped flower thus early in the year. This season, however, it has not been so satisfactory as it was last. Klondike, deep rich yellow, is an ideal market grower's variety for October supply, the blooms being stiff and lasting when cut. A well-formed incurving bloom is Louise, and a dwarf grower too. This is early. The colour is blush white. The pretty little pompon Mlle. Elise Jordan blooms early, and its neat light pink flowers form a capital contrast to the large Japanese sorts. This is much admired. A variety I have under the name of Mme. Vaucher is a charming October kind. The shade of salmon-pink is rich and pleasing, and the plant is especially bushy and free. Rayonnante is a kind which blooms early. I do not admire its quilled florets, although it makes a good decorative variety.

H. S.

Yellow Chrysanthemums of recent origin.—These seem to be almost overwhelming this season, and some of the yellow novelties are really grand. Le Grand Dragon has shown some splendid blooms long before October was out. M. Louis Rémy is a pale yellow sport from one of the Mrs. C. Harman-Payne family. R. Hooper

Pearson is not only a noble bloom in size, but the colour is deep, rich, and attractive. Among the colonial seedlings, Wattle Blossom, Lord Salisbury, and Mrs. Frank Gray-Smith are of this colour. The continental novelties include Soleil de Decembre, which was well developed at several places long before October was over, and is of a golden-yellow shade. It is one of Calvat's, as is also Eliane, which has long strap-shaped florets loosely arranged. The same raiser sends us Zephoris, one of his best for 1899. This is large in size and pale golden. Soleil de Lyon is also a yellow novelty. Edith Pilkington, a certificated Japanese, has very long, drooping, medium-sized florets, which are twisted and curly. This is a beautiful shade of canary-yellow, deepening towards the centre. Mrs. A. Cross, J. E. Clayton, and several others of less attractive appearance must complete the list.—C. H. P.

Chrysanthemum Gloire du Rocher.—This is now left behind in the race for huge blooms, but for decoration it occupies a prominent position. On October 28 at the Chrysanthemum exhibition in Battersea Park it was one of the most noticeable of all the varieties there represented, the warm, light red tint of the handsome blossoms causing them to stand out from all their associates. Its comparatively dwarf, sturdy habit is greatly in its favour, while the distinct-looking foliage is well retained. It is quite an old variety as Japanese Chrysanthemums go, for it received a certificate from the National Chrysanthemum Society in the autumn of 1890, and was, I believe, distributed the following spring. The history of this variety is very interesting, as cuttings of several kinds were sent to Algiers, and the seed saved therefrom was returned to England. Among the varieties of which cuttings were sent was the then popular Val d'Andorre, the seed from which yielded Gloire du Rocher.—T.

NEW CHRYSANTHEMUMS AT HEYWOOD.

IN Lord Ludlow's gardens at Heywood, Wilts, Chrysanthemums have not only been well grown for some years past, but new kinds have received more than average attention, every season the best of the current novelties finding their way thither. By the first week in November a great many of the blooms were at their best, needing heavy shade to keep them for some later shows. Between 400 and 500 plants are cultivated for specimen blooms, and among this number only a rigid selection of the best of the older kinds is retained from year to year, many not justifying their retention after their first year's trial. New varieties of the present season would seem to be better in colour and bloom than usual.

That fine yellow, J. R. Upton, was the first to attract attention, and of its colour it is probably the finest to be seen. Its petals are very long and gracefully drooping, the colour bright and clear. Some blooms of Edith Dashwood, a good one that will be grown again, measure fully 7 inches in depth, of a silvery mauve shade of colour. Henry Weeks is a good addition to the incurved Japanese section, a rosy-crimson with bronze reverse. Hero of Omdurman produces a large crimson and gold bloom; Mrs. Barkley has fine broad petals of splendid substance, silvery rose in colour; President Nonin is a very solid incurved yellow Japanese, and President Bevan, another good addition to the same section, is of a bronzy-yellow shade. Miss Mary Underhay produces soft yellow-coloured blooms and has a particularly nice petal. Mrs. White Popham was enormous, as were also Mrs. Mease, N. C. S. Jubilee, G. J. Warren, and Mary Molyneux; these are not strictly new, but are indispensable sorts of recent date. M. Fatzer may be described as apricot with a deeper flush, and gives a neat flower. Miss Nellie Pockett, a fine incurved white, is good. Marie Calvat is a very striking flower both in character and colour, a delicate flushed rose. R. Hooper Pearson is an incurved Japanese of the deepest yellow; Mrs. Coombes, a rival to the old and well-tried Vivand Morel both in colour and size. Kathleen Rogers is a fine white, as also is Jane

Molyneux. Le Grand Dragon, a magnificent yellow, is both broad and deep. Lord Ludlow is a promising incurved Japanese of a bronzy-yellow hue, and Purple Emperor, one of the finest of its colour, was represented by some fine blooms. M. Louis Remy, the yellow sport from Mme. Louis Remy, too, is of pleasing appearance and large in size. Sir Herbert Kitchener and Mr. T. Carrington, the latter a silvery purple flower, complete a selection that to me seemed the best among the newer Japanese kinds open at the time of my visit.

Incurved are grown in less numbers than are the Japanese, but each year the collection is enhanced by the introduction of the best of the newer ones. Mrs. H. J. Jones is very massive, and in colour and appearance resembles a much enlarged Mrs. R. C. Kingston. Chrysanthemiste Bruant, a neat, pale bronze, is large and good. Dome d'Or has a descriptive title. Hanwell Glory is deep in build and of a pretty shade of bronze. Miss Annie Hills has a large pink flower. W. Neish in point of colour is perhaps the most striking of the new ones, bright gold, with a suffusion of reddish bronze. This is best on a late bud, the earlier ones being coarse or uneven in petal. These are only a few of those open, but they comprise those that will be retained for future growth, because of their desirable colour, smooth petals and perfection of character.

W. S.

NOTES AND QUESTIONS.

Chrysanthemum Œour Dorothee Souille.—Looking round a lot of Chrysanthemums grown for cutting recently, I noticed a large number of this pretty kind. It is many years since it was sent out, and it belongs to a not very popular set—the Anemone-flowered—but the grower of these plants assured me it was a profitable kind.—J.

Chrysanthemum Peter the Great.—Naturally grown plants of any variety of Chrysanthemum are seldom seen, but there are some that are very beautiful when so grown. The old kind above named if struck early and allowed to take its own way makes a fine open pyramid quite naturally, and the point of every shoot is wreathed with the pale yellow blossoms. There may be others equally good, but I know of no other that makes such fine plants.—H.

Chrysanthemum Le Grand Dragon.—The present season has evidently suited this variety of last year's introduction, judging by the blooms recently submitted to the different floral committees and also by displays now being made by it in various private collections. Last season the impression prevailed that the bloom was thin and flimsy, although its rich deep yellow colour, sometimes tinted crimson-bronze, gave it a value which was not seen in other varieties. This season, however, the blooms are large, deep and rather full, while the petals are very long and the colour distinctly good. It is a plant of easy culture and of medium height.—D. B. C.

Naturally-grown Chrysanthemums.—Chrysanthemum societies should, I think, make a class for growing plants carrying from three to nine blooms, and exhibited so as to show the points of a perfectly grown plant. Groups are very pretty to look at, but do not afford one much opportunity of studying the individual plants which compose it. There must be many people who would much appreciate a chance of comparing their own plants at home with those grown in a first-class nursery, so that they might observe the stems and leaves and gain a useful object-lesson by seeing the condition in which a plant must be before it can give perfect blooms.—E. S. B.

Chrysanthemum Australie.—This variety will no doubt be seen in exceptionally fine condition at the leading shows this season, and from what I have seen the blooms will be set up true to character. The inside colouring of the petals, which are very long and broad, is rosy amaranth with a silvery white reverse, and these being of incurved Japanese form, it will be readily seen how massive is the bloom when finished. The National Chrysanthemum Society last season bracketed Mr. T. Carrington as "too much alike" to the above variety, but upon comparison the newer sort seems to be of a much prettier shade of colour, with shorter florets and smaller flowers. There certainly is some resemblance, but they are sufficiently distinct.—C. A. H.

STOVE AND GREENHOUSE.

CARDIOSPERMUM HALICACABUM.

THIS warm greenhouse climber is a native of Jamaica. The seed must be sown in a pot in heat in spring, the plant being an annual. It grows rapidly, and commences to bloom in the early stages of growth. The plant here illustrated was grown in a pot, the shoots being trained to the top of a young Larch tree inserted in the pot. The plant was about 4 feet high. The flowers, which are white and very small, are followed by big green pods, very similar to those of a Cape Gooseberry. In these pods are two round, black, hard seeds. As these seeds ripen, the bladder-like pods

the leaf axils new racemes were issuing from the pot upwards, intensifying the already dazzling masses of colour. They were the finest plants I have seen anywhere, and there are many others who have expressed similar views. These stood on the floor of a span-roofed house, which was both warm and light.—W. S.

Momordica Charantia.—This when in fruit is a very ornamental climbing plant. In America it is known as the Balsam Pear. I grow a few plants every year on account of their highly ornamental fruit. It is an annual. My plan is to place three plants into a 4½-inch pot, and when well rooted these are transferred to 8-inch or 9-inch pots, using a Larch Fir top for the plants to trail over. They are grown on in a warm house till they have filled the pots with roots and set the fruit, when they are removed to a cold greenhouse for the summer. The fruit is long, like a Pear, prickly, and of a bright orange colour. When the fruit is ripe it bursts and shows the inside, which is of the deepest red. The fruit hangs on long thread-like shoots.—DORSET.

Salvia splendens and its varieties. — Always a welcome plant for the autumn because of its rich colour, its cultivation should be taken up more freely than it is. Where there are conservatories to be kept gay Salvias are invaluable, but to be really effective they should be grown in sufficient numbers to furnish well the structure intended for their reception at flowering time, and not arranged a plant here and there among others of a different shade. Grown and arranged in groups they at once arrest attention, but solitary plants, unless of exceptional size and merit, are ineffective. At Gunnersbury House at the end of September Mr. Hudson had a batch of 150 plants all in bloom, not of the old type, but the newer splendens grandiflora and compacta. S. s. grandiflora is a fine sort, having large spikes, the desirable feature of these being the retention for a long time of the calyx after the tube has fallen. This is a great gain over the old splendens. S. s. compacta, as its name implies, is of



Cardiospermum Halicacabum. From a photograph sent by Mr. J. Crook, Forde Abbey, Chard.

turn yellow and drop down. The leaves resemble those of a Hop.

The seed was sent me by a lady travelling in Egypt. It is not particular as to soil provided it is open in texture. The pods are produced freely, and, being uncommon, the plant is always admired.

Forde Abbey.

J. CROOK.

Acalypha hispida.—For a time this created quite a sensation, and when exhibited as a new and rare plant won many prizes. As ordinarily grown it has lost a deal of the novelty it first possessed, but anyone privileged to see the plants grown by Mr. Hudson at Gunnersbury House would not soon forget them. They had been grown on from cuttings into large single-stemmed specimens quite 6 feet in height. Their foliage was immense, and the floral racemes both exceedingly numerous and of great length. From

dwarfer habit, quite as free-blooming, if not more so, and almost as fine in the flower. These, standing on the floor of the fruit houses devoted at the time to pot trees, presented quite a glow of colour. The plants were growing mostly in 8-inch pots.—W. S.

Drosera dichotoma.—This is perhaps the most generally grown of the Sundews, and a pretty and interesting plant. The leaves grow 6 inches or more in height and are cleft into two lobes, which with the long stems give the plant a very graceful appearance. Its culture is not difficult in a suitable house, a good position being the lightest part where cool Orchids thrive. The plants are best grown in well-drained pots or pans, these being placed on others inverted over pans of water or on a stage over very damp material. The compost most suitable for them is three parts of living Sphagnum Moss to one of peat fibre and a little coarse silver sand or crock dust. Anyone who knows the British species of

Sundew and has seen them growing in our native woods will at once see the kind of treatment the roots need. Usually they grow in native Mosses, often with their lower roots pushing under stones or sticks, and this is what they like under cultivation. Light syringings overhead are of great assistance to them, but one point must not be forgotten—fumigation is very dangerous. Occasionally one may fumigate a house in which they are grown without injury, but it is very seldom.

Bouvardia President Garfield.—It is now a good many years since this and the double white B. Alfred Neuner were sent out, but it is doubtful if we yet have any better. The pleasing flesh-pink double blossoms are very useful for cutting, and they last better than single forms, while on the plants they are very fine. I saw a nice batch of President Garfield recently at Culford, where it was growing in a cold pit with others and flowering freely. Bouvardias, like many other fine greenhouse plants, suffer badly from being coddled up in a great deal more heat than is good for them. It not only produces a weak, attenuated growth, but it brings insects in galore to feed on the already weakened growth. Such plants cannot be satisfactory in any way; they are not pretty to look at, they do not flower freely, and, moreover, the blossoms that are produced last but a short time only. Those who do not care to plant them out should at least, after repotting, give them a cool and airy position in a frame without the lights in summer, so that the growth is hard. The shoots during the summer should be kept pinched, the last pinching taking place in August.—H. R.

Early Roman Hyacinths.—One of the chief mistakes that are made in connection with the early forcing of this crop is that of putting the bulbs too early into strong heat and before the plants have rooted sufficiently. For those who must have these things in flower at the very earliest moment they are to be obtained, there must be no delay at any time. Nor must there be any mistakes in the work as it proceeds. There are those who are only now potting their supplies of these things, while the earliest batches of bloom are finding a ready sale in the leading markets. To get these thus early in flower, however, requires the greatest care and judgment, much more so, indeed, than at any subsequent period. These early supplies are obtained by potting the bulbs in August as soon as they are to hand, and after a good soaking of water covering the plants with about 4 inches of cocoa fibre refuse in the open. The time of introduction into heat should be proportionate to the time the roots have been potted. If from any cause the bulbs are not received or even potted as early as usual, allowance must be made for this by keeping them longer in the open, that the fullest possible amount of root fibre may be produced. Much of the success of the crop rests upon this, for with abundance of roots the plants will quickly respond to the warmer conditions of forcing. It is usually the weakly rooted or insufficiently rooted plants that produce feeble or stunted spikes, and such are of no value to the florist.

Varieties of Begonia Gloire de Lorraine.—The beautiful Begonia above-named a year ago, possibly less, was alone, and varieties of it appeared to come quite slowly. Now, however, in the space of a few weeks two distinct forms of it have put in an appearance, each possessing a value of its own. One of these is the pink-flowered sport that originated with Mr. Hudson at Gunnersbury House, and quite recently secured the award of merit from the Royal Horticultural Society under the name Mrs. Leopold de Rothschild. In this the blossoms are not only considerably larger, but of a decided pink tone. It was regarded as a charming addition to the original kind. Last week another variation appeared from Hawick, this time a pure white form, bearing the distinctive name Caledonia, or White Gloire de Lorraine. Such a kind has long been desired, and now that it really exists it is

obvious that it is a veritable pure white of the above plant. The floral committee, neither doubting its value commercially nor its merit from a horticultural point of view, desired to see it again, as the plants shown were but little removed in many instances from cuttings. Yet even the very smallest of these proved quite conclusively its chief value—its freedom of flowering. It is quite possible the plants have been hurried somewhat, or possibly over-cared for, hence the exceeding paleness of foliage, verging in some plants almost to yellow. Another season, however, will see the plants more fully developed and in their true character. It is one of the most important novelties of the year.

OLD AND NEW TREE CARNATIONS.

It is somewhat strange that while during the last twenty years great strides have been made in border Carnations, and almost innumerable really good varieties have been added to the list, comparatively few sterling additions have been added to the Tree or winter-flowering section. It is now some twenty years since I first commenced the culture of Tree Carnations, and were I to-day forming a collection, I would, having profit in view, confine myself, with one or two exceptions, to the sorts I grew then. I am aware many of the newer introductions are fine so far as the individual flower is concerned, but what both the grower for sale and the private gardener who has to fill the basket must have are good growers and free bloomers. Many of the market varieties would also please those who prefer good-sized blooms if good all-round culture is given and a little disbudding practised. Really good scarlet sorts are scarce, and whites even more so. Purity and Mme. Carle were considered the two best whites for years, but both had to give way to that, in my estimation, unsurpassed variety La Neige. True, the individual blooms are a trifle less in size than those of some of the shy-blooming whites, but the quantity a well-grown healthy bush will produce is something astonishing. The flowers also expand readily during the dull dark days of winter and are of the purest white and sweetly scented. The growth is particularly vigorous and branching, and the constitution so good that it is very seldom a plant dies. It is, moreover, one of the easiest to propagate. I have heard Uncle John well spoken of, but have not grown it myself. It may be a larger, but not a more prolific sort. Good reliable reds are also none too plentiful, my old favourite, Alegatière, not being, I think, yet surpassed. One can always depend on it, its extra large, noble, brilliant blooms being always admired and commanding a ready sale. The at one time much-applauded rival, Winter Cheer, has not proved a success—at least generally speaking. For every fully developed bloom I cut from it Alegatière gave me half-a-dozen at least, but the worst feature about Winter Cheer is its liability to partial withering and discoloration before the blooms are expanded. No doubt there are growers who succeed with it, but they are, I think, in the minority. Another good red Carnation I used to grow is John Baldwin, a lighter shade of colour than Alegatière and apt to show white veins, which at the present day would, I suppose, be considered a drawback from a market point of view, but which is immaterial in private gardens.

Pink varieties of sterling merit are few. In spite of the noise made about Mme. Thérèse Franco when first introduced, it has proved an indifferent variety, not a few having discarded it. Like other poor growers and shy bloomers, it may suit those who are satisfied if they secure a few large flowers, which are allowed to remain on the plants till they fade, but I should say that for every hundred plants of Thérèse Franco grown for market there are a thousand or more of Miss Joliffe and Reginald Godfrey—a pretty good proof of its marketable value. Miss Joliffe is a lovely Carnation, its rich shade of colour being so much appreciated in bouquets and button-holes, but, although of vigorous branching growth and

very free-flowering, it has, unfortunately, a tendency to die off suddenly. Some growers have no trouble with it, while others who once succeeded with it have had reluctantly to abandon its culture. Such no doubt bailed with much satisfaction the arrival of Reginald Godfrey, which, if not quite so vigorous and free, has a more reliable constitution. Yellow Tree Carnations are the scarcest of all; in fact, I do not know of a really yellow Tree Carnation worth growing from a cut-flower point of view. The best yellow, I believe, is Miss Audrey Campbell, which is really a border variety, but which, if struck in autumn or early in spring and grown on quickly in not too large pots, will give a nice lot of richly-coloured flowers during the winter and spring. J. CRAWFORD.

Freesias failing.—"Cornubian," in his reply to a correspondent, says he has never met with a case of Freesia bulbs dying in the manner described, and it only shows that he has been very fortunate and successful in their culture. It is not at all unusual for them to die in the way described, especially when, as "Cornubian" says, they are dried off or removed from their pots too early before the growth is properly finished. I recollect purchasing a lot at a sale in Suffolk some four years ago, and on shaking the bulbs out I found every one "mummified," as "Cornubian" so aptly describes it.—H. R.

Thunbergia fragrans.—Though the specific name of this Thunbergia is somewhat of a misnomer, for as far as my experience of it extends it is scentless or nearly so, yet for all this it is a very pretty climber for the stove or intermediate house. The pure white flowers, each about a couple of inches across, are borne throughout the summer and autumn months, and nestling among the very dark green leaves have a pretty effect. It is of a medium rate of growth, and may be used as a rafter plant if the structure is not too lofty. Unlike many climbers, this Thunbergia may be grown and flowered well when confined to a large pot, whereas the vigorous kinds, such as T. grandiflora and T. Harrisii or laurifolia, succeed much better when planted out in a prepared border.—T.

NOTES AND QUESTIONS.—STOVE.

Saxifraga Fortunei.—In the outdoor garden this autumn-flowering species is of but little value by reason of its tender nature. In the greenhouse, however, the plant is worth growing in pots, and with liberal treatment flowers with considerable freedom. It is only rarely, however, that sufficient interest is taken in these out-of-the-way kinds to do them justice. All the same, a well-grown plant is very pretty at the present time.

Manettia bicolor.—The bright yellow and orange tube-shaped flowers appear all the more effective as winter approaches. The plant can be grown and flowered in quite a small state. Single plants grown in 4½-inch pots, with the growths trained round four or five small sticks about 1 foot in height, bloom very freely, and when flowering subjects for furnishing have to be forthcoming at this time of year, such prove very serviceable.—A. W.

Tecsonia Van Volxemi fruiting.—Inquiry is made if this is edible by Mr. Renshaw (p. 294). Though not usually accepted as a dessert fruit, there are instances where the fruit is eaten and much liked. I have eaten it myself some years since. I have never known the fruit to be sent to table as dessert, but it has been gathered when quite ripe from conservatory plants by younger members of the families with whom I have lived. I have never heard of any harm accruing from eating the fruit.—W. S.

Celosias.—These are useful in many ways in the autumn and winter months, especially when used amongst Ferns, &c. Recently I saw a grand strain at South Villa, Regent's Park. All shades of red and the richest yellows were represented, the plants each from 1 foot to 1½ feet high and well branched. Mr. Kelf isolates his best plants every year for seed. A few days later I saw some nice dwarf plants in 4½-inch pots branched down to the pots and not more than a foot high at Didlington Hall, Norfolk.—DORSET.

Salvia splendens.—This showy plant is most useful for providing colour during the dull months.

At Bramley Park it is grown in quantity. The scarlet flowers are borne in great abundance and are found excellent for cutting. Cuttings are rooted in spring and the plants put into the open ground. They require but little care except topping the shoots once or twice during the summer to form bushy plants. They are lifted and put into pots early in autumn and come quickly into flower.—H.

Nerine japonica—Notwithstanding the immense numbers of this Nerine that are sent here every year from Japan, it is very rarely that one meets with it in bloom, and I have tried various modes of treatment with but little success. Whether the above name or that of *Lycoris radiata* is the correct one, it is certainly quite distinct from the generally grown kinds of Nerine, the rather narrow glaucous green leaves being one distinguishing feature, while another is the reddish crimson-tinted blossoms, with their unusually prominent stamens. I have not succeeded in flowering it regularly, and if any reader of THE GARDEN has done so, I shall be very pleased to learn the treatment given it.—H. P.

FLOWER GARDEN.

THE NIGHT-SCENTED TOBACCO.

(*NICOTIANA AFFINIS*.)

This well illustrates the fact that a really good plant will come quickly into favour provided no special difficulty exists in its culture. It was first mentioned in THE GARDEN of July 9, 1881, by Mr. W. H. Cullingford, of Kensington, who appears to have been the first to introduce it. He received seeds from Hyères, and showed a splendid plant at one of the evening fêtes of the Royal Botanic Society. No one has been deceived by the first appearance of this *Nicotiana*, as wherever one goes, either in town or country, he will be sure to find it grown, especially in suburban gardens, where few things as a rule do well. In the evening, when the flowers are open, the fragrance is the strongest, and the bold long-stalked flowers have a peculiar effect in the dim twilight. It does well in pots for the decoration of the conservatory and groups in the border look well. A bed on the grass filled with plants is very effective. A somewhat sheltered position is necessary, as rough winds give the plants a ragged appearance. It also requires a rich soil and plenty of moisture during dry weather. I have found that when the winter is not too severe the roots live and the plants start strongly in the spring, coming into flower much earlier than those which have been raised from seed and planted out.

W. T.

Lobelias for stock.—I was very much interested in the note by "E. J." on p. 334 respecting keeping up a stock of *Lobelia*. Everyone who has had to keep up a large stock of this plant knows the liability of the plants, not only to damp, as "E. J." describes, but also to take mildew badly, a condition of things quite fatal to raising a large or healthy stock. As your correspondent says, such a method cannot be too widely known, and I for one am greatly obliged to him for the simple but useful hint. As I am situated I have not a great demand for this or any other bedding plant, but I have known the time when such a stock as he describes would have been invaluable.—H. R.

Fuchsia fulgens planted out.—Despite the innumerable varieties of *Fuchsia* that we have now in gardens, some of the original species still hold their own, being, at least in a few instances, particularly showy and quite distinct from the hybrid forms so generally grown. The tendency towards mixed beds in the flower garden during the summer months, which has made considerable headway of late years, has led to *F. fulgens* being grown more now than was at one time the case, as it is well suited for such treatment. Numerous examples of it have been very

satisfactory in many of the London parks during the past summer, and a bed of it at Kew near the Palm house was throughout the latter part of the season very attractive. The entire bed was filled with this *Fuchsia* alone, which grew freely, thus presenting a mass of its handsome rugose foliage set off by numbers of its showy blossoms.—T.

A pretty mixed bed.—A large round bed here, planted in the following manner, has been greatly admired during the past season. In the first place, *Lilium speciosum* and *Lilium Kratzeri* were planted three bulbs together about 5 feet apart, and not nearer the edge of the bed than 4 feet. Next came dwarf flowering Cannas, set out about the same distance apart, and which reached to within 18 inches of the margin of the bed. Lord Beaconsfield and Lady Heytesbury *Fuchsias* were planted round the Cannas, and then Betteridge's Quilled Asters were thinly disposed all over the bed, and the groundwork filled in with *Sedum Fabaria*, the same forming the outside ring or edging to the bed. About the middle of September, when the whole of these plants were in full bloom, this bed formed a

"H.'s" plan is an excellent one for those growers who are short of glass space, especially when there is an absence of the means of early seed-raising. Cuttings strike freely enough on a warm manure bed or in propagating pits, and a stock can soon be worked up in this way. From seed, however, it is quite as easy; in fact, more so, because careful sowing and watering ensure a sufficiency of plants from one sowing, and once pricked out no further anxiety remains.—S.

October climbers in South Devon.—The large purple stars of *Clematis Jackmani* have for the most part disappeared, though here and there a few belated blossoms may still be seen. Varieties of *C. lanuginosa* are still holding their widespread pale lavender and white blooms, while *C. songarica* creates a pretty effect now that it is covered with its feathery seed-vessels. *C. Vitalba*, the Traveller's Joy or Old Man's Beard, is also particularly decorative at the present time, especially when garlanding tall evergreens with its smoke-grey trails. Some lofty *Ilex* are now objects of great beauty, so thickly is their dark green foliage mantled by the growths of this



The Night-scented Tobacco (*Nicotiana affinis*). From a photograph sent by Mr. J. T. Newman, Berkhamsted.

charming picture. This *Sedum* might be used a great deal more often than it is, either alone or in conjunction with other subjects, its masses of pink flowers being always effective.—A. W.

Lobelias from seed.—On p. 254 "H." points out the uncertainty of *Lobelias* from seed, and advocates cuttings for next year's supply. Except for carpet bedding, where, of course, uniformity is most desirable, seedlings can be obtained quite true enough for edgings or carpeting; indeed, from a reliable source one gets seed so true to character, that very rarely are there any "rogues." No one can deny that seed-raising in spring is far less trouble than having to save one's store plants throughout the winter, especially when stock has to be potted up in summer and grown for several months. It is quite true, as "H." says, that *Lobelia* winter much better if established early in pots. Lifted in autumn, damp is a great enemy to late-potted *Lobelias*, though the precaution of topping them and getting a new growth just prior to lifting obviates this to a great extent.

Clematis, whose rope-like stems hang from the boughs in a fashion that recalls the lianas of the tropics. *Cobæa scandens* is still bearing its cupped blooms of deep purple, and *Eccremocarpos scaber* shows an infrequent orange-yellow flower-spray. *Lapagerias*, both red and white, are yet in bloom on a shady north wall, and the blue Passion Flower is bright with its thickly strung oval fruits of clear orange hue. *Plumbago capensis* in a sheltered nook carried its pale blue blossoms through the greater portion of the month, and *Solanum jasminoides* at the commencement of October was at its loveliest, every swaying spray from the eaves downward being terminated by a many-flowered white bloom cluster, the whole forming a very cataract of blossom. *Tropæolum tuberosum* has retained its gorgeous appearance through the entire month, its orange and scarlet blossoms standing well out from the foliage, forming a bright flower fringe to the green background. *T. Lobbianum* has also created a brilliant effect with its scarlet flowers on a cottage

wall, and I noticed a vermillion trail of *T. speciosum* on the horizontal bough of a Yew in the early days of the month. The Virginian Creepers have been especially attractive, their glowing colours having doubtless been enhanced by the hot summer, *Vitis inconstans* in particular being remarkable for the richness of its colouring. Many of the Vines have been very decorative, *V. humulifolia* presenting a pretty picture early in the month with its bunches of turquoise berries.—S. W. F.

Crocus speciosus Aitchisoni.—To some of us at least the later flowering of this variety of the ever useful *Crocus speciosus* is a merit of no mean order. It is not everyone, of course, who cares for the *Crocus* in the late months of the year, and to such it seems unseasonable. Many of us, however, look upon these late blossoms as precious things, bringing us pleasure at a dull season. Those of like mind with me will not regret making the acquaintance of Dr. Aitchison's *Crocus*. In my garden it comes into bloom when the flowers of the type, in a practically similar position, are over. Nor is this later blooming its only recommendation. It is also noteworthy for its larger flowers, of equal beauty to those of the older form. To-day (October 23) it is only about a quarter of an inch above the soil, and cannot open for some time to come. *Crocus speciosus Aitchisoni* is an excellent grower in the light soil in which it is planted here, and gives little trouble beyond keeping deep-rooting weeds from trespassing upon it and giving it a slight annual top-dressing. Its flowers, like those of the type, are very pleasing with their purple lines and feathering on the blue ground of the main colouring of the segments. Although Dr. Aitchison's *Crocus* was rather high in price on its first introduction it is now much cheaper, and a few bulbs, or rather corms, are not beyond the reach of most admirers of hardy bulbous flowers.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Callistephus sinensis.—The caution regarding this single-flowered form of the China Aster, on p. 348 is particularly well-timed, for it has attracted a good deal of attention lately, and while personally I think it a delightful flower, yet many prefer the double blossoms, and would be disappointed to find it almost a counterpart of some that were destroyed directly they showed their true character, for the practice of eradicating the plants bearing single or semi-double blossoms has been rigorously followed for years. We shall, however, now probably see this *Callistephus* grown regularly in the future, and in addition to the form of which a coloured plate appeared in THE GARDEN of March 26 last year we may expect other colours now that attention has been directed to the beauty of the single-flowered kinds.—H. P.

—Is not this plant simply a single China Aster? Certainly I have seen it only at the Drill Hall, but I gather from Mr. John Weather's note that it is but an annual and needs the same treatment any ordinary annual Aster does. If this be so, would it not have been much better to have introduced it to commerce as a single-flowered annual Aster under the name of Mauve Beauty or some such name, as being then so much more likely to catch on with the flower-loving community than if offered under its botanical appellation? That it is a very charming garden flower there can be no doubt. Lovers of pleasing single flowers and of a soft and charming hue of colour will like it immensely. It simply needs treating as an ordinary Aster.—A. D.

NOTES AND QUESTIONS.—FLOWER.

Gerbera Jamesoni.—This is one of those striking plants that attract a good deal of attention, even in small quantities. This latter phase, however, for the present appears almost characteristic, for only by solitary flower-heads is one now and again reminded of its beauty, and not least its value in a cut state. It is one of those plants that not a few enthi-

vators would like to see plentiful, or at least obtainable at a cheap rate.—E. J.

Helianthus H. G. Moon.—Those in want of one of the boldest of the Sunflower family should add this fine kind. It is one of the *H. multiflorus* group, and more closely approaches *H. multiflorus maximus* in stature than any other. Side by side with this it may not be widely removed in point of colour, yet I am inclined to regard the above—speaking entirely from memory—as having less pointed florets. In any case it is a fine subject where bold effect is desired.—E.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 7.

THERE was a great falling off in the number and extent of the exhibits on Tuesday last, owing no doubt in some degree to the Chrysanthemum shows, both suburban and local. It is well known that both this week and next the majority of these exhibitions are being held; hence it need not cause any surprise if the first meeting in this month is a smaller one than usual.

It was worth the journey, however, to see the charming exhibit of *Nerines* from Mr. Elwes, many of which are quite unique both in their character and colouring, being perfect gems in their way. Fine as the Chrysanthemum may be and appropriate to the season also, these *Nerines* are not one whit behind as regards beauty; no finer plants at this season could be desired for indoor decoration. A large group of *Begonias* (*Gloire de Lorraine* and Mrs. Leopold de Rothschild) came from Gunnersbury and made a pleasing display. Conifers of useful size and distinct character came from Bagshot. Chrysanthemums were shown in excellent condition from two or three sources. Orchids were not numerous, the best being *Cattleya labiata* in variety, than which there is not a finer autumnal flower in its class. Fruit exhibits were also limited, owing no doubt to the reasons already given. Fine collections of Apples and Pears were, however, sent from Belvoir and also from another source.

Orchid Committee.

First-class certificates were awarded to the following:—

CATTELEYA LABIATA.—Strange to say, no record exists of this well-known *Cattleya* having been certificated. Plants were shown by Mr. R. I. Measures, Mr. A. H. Smee and Mr. Leopold de Rothschild. Mr. Measures showed a plant with eleven flowers, Mr. Smee two cut flowers, and Mr. Rothschild a group of cut flowers, illustrating the varied forms. This species is too well known to need description here.

CATTELEYA LABIATA ALBA PRINCESS OF WALES.—This is a lovely form, the petals beautifully crisped on the margin, the lip white, with indistinct tracings of rose on the centre area of the front lobe and bright orange-yellow through the throat. It is one of the most distinct and beautiful forms of the white *C. labiata*. From Messrs. J. Veitch and Sons, Ltd., King's Road, Chelsea.

CATTELEYA LABIATA GILMOURIA.—A grand form, with pure white sepals and petals, the front lobe of the lip white around the margin, the whole of the centre area deep crimson-purple; the side lobes white, shading to yellow at the base and through the throat. It somewhat resembles *C. l. Cooksoniæ* (previously certificated), but the blotch in the centre of the lip is larger and of a deeper colour. The plant carried a two-flowered raceme. From Mrs. Briggs-Bury, Bank House, Darlington.

An award of merit was given to—
DENDROBIUM CECYGYNE.—This is an old and well-known species, the sepals and petals greenish yellow, suffused and barred with deep brown, the whole of the front lobe of the lip deep, almost blackish brown, the side lobes green, spotted brown, having some yellow at the base. The plant carried fifteen flowers and buds. From Messrs. H. Low and Co., Bush Hill, Enfield.

Messrs. H. Low and Co. were awarded a silver Banksian medal for a nice group consisting principally of *Cattleya labiata* in varied tints and forms, *Lælia trentonensis*, several varieties of *Oncidium Forbesi*, a plant of the lovely *Sobralia Lindenii*, the sepals and petals blush-white, the lip white, splashed with two shades of colour on the disc and through the throat, and a plant of the distinct *Catasetum callosum* with ten of its green and brown flowers. The distinct *Cypripedium insigne* Laura Kimball was also included. The top of the dorsal sepal of this is white, shading to greenish yellow, veined with deeper green at the base. The petals and lip have a greenish yellow ground colour, with a light suffusion of brown. Mr. E. Kromer, West Croydon, was awarded a bronze Banksian medal for a collection of about eighteen varieties of *Cattleya labiata*. The most distinct were *C. l. Kromeræ*, a distinct and pretty form, the sepals and petals having a blue tinge, the lip pale, almost white around the margin, with a distinct blotch of plum-purple in the centre. Another distinct form had rose-tinted flowers throughout. Several remarkable dark varieties were also included. A good variety of *C. granulosa* with a five-flowered raceme was also attractive. Mr. J. Douglas, Great Bookham, was awarded a bronze Banksian medal for fourteen distinct varieties of *Cattleya labiata* (cut flowers), also four spikes of *C. Harrisoniæ*, three spikes of *Aerides nobile*, three flowers of *Cypripedium Juno*, and *Cologyne Massangeana*.

Mr. R. B. White, Arddarroch, was awarded a silver Banksian medal for a group of cut spikes (about twenty-one distinct varieties) of *Odontoglossum crispum*. The most prominent were *O. c. Geraldine*, the sepals delicate rose, tinted with a darker shade, and a few brown spots in the centre, the petals lighter than the sepals, and beautifully fringed on the margin. The base and central portion are thickly covered with miniature brown spots, the lip white, with a large blotch of brown in the centre. Major Joicey sent flowers of *Cattleya labiata*. Sir F. Wigan showed a pale variety of *Cattleya labiata*, *C. Bowringiana* concolor, similar to that known as *C. B. lilacina*, and *Lælia pumila* (Low's variety), in which the sepals and petals are white, faintly tinted with rose, the lip deep violet, margined and mottled with white in front, the side lobes white, shading to deep yellow at the base. Mr. A. S. Hitchins, Clynton, St. Austell, Cornwall, sent *Cypripedium Hitchinsæ* (*insigne montanum* × *Charlesworthi*). The dorsal sepal is white, spotted with purple in the centre, shading to green, and spotted brown at the base, the petals greenish, suffused with brown, the pouch yellow, suffused with brown. Mr. M. Gillespie sent a yellow ground form of *Odontoglossum Andersonianum*. Mr. E. Ashworth showed *Cypripedium insigne* George Ashworth. Several hybrid *Cypripediums* were also included, consisting of the following crosses: *Harrisianum superbum* × *Druryi*, the dorsal sepal white, purple at the base; and *lo grande* × *Charlesworthi*, in which the influence and intermediate characters of the parents could be plainly discerned. *C. Chamberlainianum* with varieties of *insigne* were also included. Mr. N. Cookson sent a hybrid resembling forms of *Lælia-Cattleya Dicaea* with two flowers. Mr. Leopold de Rothschild showed ten varieties (cut flowers) of *Cattleya labiata*.

Floral Committee.

The following were granted the award of merit:—

BEGONIA CALEDONIA.—This is a first-class addition to this family, and a plant likely to be much in request in the future. It is a pure white variety, a sport probably from the well-known *Gloire de Lorraine*. In all other respects save the colour it is the counterpart of the type. From Mr. J. Forbes, Hawick, N.B.

ANTHOLYZA ETHIOPICA VITTIGERA.—This is fortunately a re-introduction of a plant lost to cultivation. The plant possesses the growth of the strongest *Montbretia* or a small *Gladiolus*.

In the multiplicity of its growths from the corms it favours the former group, the leaf-blades being about 2 feet long, or nearly so. From this in *Montbretia* form the flower-spikes issue. These are quite 2½ feet long and carry numerous flowers which in colour are orange-scarlet, the tubular portion without being of a yellow tone. The blossoms are composed of six unequal segments, the uppermost nearly 2½ inches long, curving slightly, and extending completely over the stamens. The fiery colour renders the plant most attractive. It was received about eighteen months ago from Port Elizabeth in the shape of small *Crocus*-like corms, since which time it has attained quite vigorous proportions. It is fortunate so attractive a plant is so vigorous and free in growth. At present only two pots of this are known to be in this country. From Mr. J. T. Bennett-Poë, Cheshunt.

VIOLET MRS. J. J. ASTOR.—A welcome addition to the double-flowering Violets, the colour described as pink and heliotrope. We saw neither the one nor the other of these shades, and would prefer to call it dark reddish lilac. Indeed it is almost exactly the dark tone that is seen on the outside of the single pips of some of the darker coloured lilac blossoms. The flowers are large, fully double and fragrant. From Sir Trevor Lawrence, Bart., Burford Lodge, Dorking (gardener, Mr. Bain).

NERINE MISS WILLMOTT.—A remarkably striking shade of brilliant orange-scarlet, the orange being almost flame-like in intensity. From Mr. H. J. Elwes, Colesborne, Gloucestershire (gardener, Mr. Lane).

NERINE MRS. BERKELEY.—An entirely new shade and one of the most decided novelties of the year. The colour is of two shades of salmon, intense salmon prevailing, the margin of the petals being of a paler salmon hue. A very striking plant. From Mr. Elwes.

NERINE MRS. GODMAN.—This is also a decided novelty, yet one most difficult to describe. It is, however, one of those flowers wherein rose and magenta mingle to a large extent and to an almost equal degree. From Mr. H. J. Elwes.

Compared with many past exhibitions, this one was decidedly small, much vacant space being noticeable. This is of course directly due to attractions elsewhere. One of the largest exhibits before this committee, however, was that of *Begonias* from Mr. Leopold de Rothschild, Gunnersbury House, Acton (Mr. J. Hudson, gardener), which completely filled one side table, the two varieties being *Begonia Gloire de Lorraine* and its sport, *Mrs. Leopold de Rothschild*. The former is well known, the latter is the large pink sport that originated at Gunnersbury House. This is not only a decided change of colour, but the blossoms are also larger and of a pleasing pink. The newer kind is of firmer, denser habit of growth and a model of a good pot plant. All the plants were admirably grown and flowered, something like 120 excellent examples being staged. A silver-gilt Flora medal was awarded. A batch of some four dozen blooms of *Chrysanthemums*, all Japanese, came from Mr. Chas. E. Shea, Foots Cray (Mr. Miller, gardener). Some of the blooms were of high order, showing excellent culture. A few of the more noticeable were *Sunderbrück*, fine golden yellow; *Dorothy Shea*, bronze; *Lord Cromer*, crimson and gold, very fine; *Miss Elsie Teichmann*, pearly white; *Lady Ridgway*, salmon buff, shaded gold; *Oceana*, very fine yellow; *Mutual Friend* and *Gustave Henry*, grand whites; *Lady Hanham*, rosy cerise, with gold; *Edith Tabor*, *Pride of Madford*, *Lionel Humphreys*, reddish crimson, *Mons. Chenon de Leche*, &c. (silver Flora). From Messrs. J. Waterer and Sons, Bagshot, came an excellent group of conifers of medium size and well grown. These comprised such things as *Abies Nordmanniana*, *Retinospora filifera*, *R. pisifera*, *R. p. aurea*, *Thuja occidentalis*, *Abies Hookeri*, very distinct and compact; *Cryptomeria elegans*, *Sciadopitys verticillata*, a beautifully compact example, 3 feet high, of this rather scarce plant; *Cupressus Lawsoniana densa*, *Librocedrus decurrens variegata*, *Taxus hiber-*

nica Standishi, *T. grandis*, *Juniperus japonica aurea*, and others, all well furnished (silver Flora medal). Messrs. Veitch and Sons, Chelsea, staged a collection of the hybrid greenhouse *Rhododendrons*, which seem possessed of a perpetual flowering character, while Messrs. Hugh Low and Co. contributed a well-flowered batch of *Statice*s, probably S. Butcheri, the colour of which is very fine. A small collection of cut *Chrysanthemums* from Mr. W. Wells, Earlswood, Surrey, included the fine decorative kind *Etoile de Feu*, Lord Salisbury, a large flower of a pale primrose tint; *Miss Lucy Cheeseman*, rich gold; *Margaret Silhol*, pure white; *Francois Pilon*, a deep golden Japanese incurved; *Silver Queen*, delicate rosy lilac; *T. W. Barkis*, white; *Sir Herbert Kitchener*, &c. From Mr. H. J. Elwes, Colesborne Park, near Gloucester (Mr. Lane, gardener), came a beautiful assortment of *Nerines*, all seedlings, as yet unnamed. A few of the most promising have already been noted, but here also in a group of several dozen plants all in flower were many notable forms, and every conceivable shade of pink, rose, flesh, pale salmon, with nearly pure white or these with a scarlet rib, and others of intense colour, showing in no small degree the remarkable range of colour and not less so of form and beauty that is obtainable when discretion and judgment go hand in hand with the hybridist. Even the poorest of these things would be very beautiful in the cut state, and seeing the little room occupied in their culture, it is surprising that greater interest is not centred in these plants (silver Banksian medal). In a cut state the Sweet Violets from Mr. H. Rogers, Rendlesham Hall Gardens, Woodbridge, were very beautiful, the varieties *Marie Louise* and *De Parme* being those shown. The former is much the darker of these two double kinds, the flowers being very large in each case. A box of plants of the first named was also shown (bronze Banksian medal). A Tree or perpetual-flowering *Carnation* called *Oxford Yeoman* came from the Duke of Marlborough, Blenheim Palace (Mr. T. Whillans, gardener). It is a scarlet-flowered kind possessing but very few petals. Mr. W. Seward, The Firs, Hanwell, had the following *Chrysanthemums*: *Thos. Stephenson*, bronze, *May Neville* and *W. H. Whitehouse*, red-lilac. The Hon. W. H. Smith, Greenlands, Henley-on-Thames (Mr. Henry Perkins, gardener), had *Chrysanthemums* *H. Perkins*, Jun., gold and bronze, and the Hon. W. H. Smith, a crimson velvet shade, good in colour. Mr. J. Corbett, Malgrave Castle, Whitby, also had one or two *Chrysanthemums*, the most telling being a rich yellow sort named *Jessie Corbett*. The flowers were, however, small, and not equal to those of present-day kinds.

Fruit Committee.

A first-class certificate was given to—

PEAR EMILE D'HEYST.—Very fine samples, flesh soft and rich in flavour. It has been long in commerce, but its merits had not been previously recognised. It is a good cropper and has a strong constitution. From Mr. G. Woodward, Barham Court, Maidstone.

Awards of merit were given to—

APPLE MISS PHILLIMORE.—Fruits of medium size, much in shape resembling those of Cox's *Pomona*, one of the parents. The flesh is of excellent flavour. From Messrs. G. Bunyard and Co., Maidstone.

CABBAGE ST. MARTINS.—One of several tried at Chiswick and sent up from the gardens; heads round, solid, white, turning in early. From a cross between *Christmas Defiance* and the *Rosette Colewort*. From Mr. G. Wythes, Syon Gardens, Brentford.

A collection of fifty dishes of Apples and thirty dishes of Pears was shown by Mr. Divers, gardener to the Duke of Rutland. The samples were good generally having regard to the district and climate, and were chiefly of Apples grown on bush trees on the Paradise stock, and of Pears on horizontal trained trees on walls. These latter were quite old, whilst the Apple trees

have been planted within a few years. Good samples of *Peasgood's Nonsuch*, *Warner's King*, *Dewdney's Seedling* (like *Stone's Pippin*), *Bismarck*, *Stirling Castle*, *Pine-apple* (like *Waltham Abbey Seedling*), *Newton Wonder*, *Alfriston*, *Bramley's Seedling*, *Tower of Glamis*, *Wellington*, *Prince Albert*, and *Lord Derby* were prominent. Of dessert varieties there were capital *Rosemary Russet*, *Ribston Pippin*, *Worcester Pearmain*, *Cox's Orange Pippin*, *Allington Pippin* (very handsome), *Bess Pool*, *Ross Nonpareil*, *Golden Winter Pearmain*, *Reinette du Caux*, *Cockle Pippin*, and others. Of Pears there were excellent samples of *Huyshe's Victoria*, *Easter Beurré*, *B. Clairgeau*, *Emile d'Heyst*, *Beurré d'Anjou*, *Beurré Jean van Geert*, very rich colour; *Gilgil*, very fine; *Beurré Diel*, *Beurré Rance*, and others. The entire collection was prettily dressed with coloured foliage, feathery blossoms of the wild *Clematis*, and highly coloured *Dartmouth Crabs* (silver-gilt Knightian medal). The other collection from Kent was that of a well-known market grower, Mr. A. J. Thomas, Rodmersham, Sittingbourne, who set up seventy-eight dishes of Apples and thirty-nine of Pears, nearly all very fine samples. Some exception was taken to the fact that several duplicate dishes were staged, a practice which the committee agreed must not be repeated. The Pears included *Beurré Samoyeau*, like a richly coloured *Beurré Clairgeau*, which also was shown; *Belle de Thomas*, large green obtuse fruits; *Princess*, *Bellissime d'Hiver*, *Marie Louise*, *Duchesse d'Angoulême*, *Belle Fouqueray*, *Columbia*, *Doyenné du Comice*, *Grosse Calebasse*, &c.; and of Apples the dessert included very fine clean *Cox's Orange Pippin*, *Court Pendu Plat*, *Claygate Pearmain*, *Worcester Pearmain*, *Carlisle Castle* (like *Gascogne's Scarlet*), *Baumann's Red*, *Egremont Russet*, *Gooseberry Pippin*, *Scarlet Nonpareil*, *Blenheim Pippin*, *Ribston Pippin*, &c. Of cooking kinds, very fine were *Prince Albert*, *The Queen*, *Lord Derby*, *Newton Wonder*, *Royal Jubilee*, *Gloria Mundi*, *Chelmsford Wonder*, *Bismarck*, *Lady Henniker*, *Mère de Ménage*, *Striped Beau-fin*, *Golden Noble*, *Yorkshire Beauty*, and *Withington Fillbasket* (silver-gilt Knightian medal). Mr. Vokes, Winchester, sent a small Apple, said to be the sweetest grown, but the sample hardly bore out that assertion. He also sent samples of a large *Cobnut*, said to be a chance seedling. It was agreed to ask for samples in the coats, also that *Gosford Cobs* be obtained for comparison. Mr. Allan, gardener to Lord Suffield, Gunton Park, Suffolk, showed huge *General Todtleben* Pears, some 2 lbs. each in weight, from a south wall. Mr. C. Ross, gardener to Captain Carstairs, Welford Park, Newbury, sent an Apple named *Tyro*, from Welford Park Beauty and *Pearson's Plate*, also *Pear McKinley*, raised from *Ne plus Meuris* x *Duchesse d'Angoulême*; fruit medium sized, having the form of *Ne plus Meuris*. It was very sweet, but had little flavour. Messrs. James Veitch and Sons had a large dish of a Crab named *Mr. L. de Rothschild*, raised by crossing *John Downie Crab* with *Cox's Orange Pippin*. It was pretty. Mr. R. Morrow, Leominster, had a pretty rich-coloured Apple, *Robt. Morrow*. Mr. G. Woodward, gardener to Mr. Roger Leigh, Barham Court, Maidstone, sent very large fruits of *Cox's Orange Pippin* and a smaller sample to show greater fitness for the dessert. Mr. R. Handley, gardener to Miss Breton, Sandhurst, Berks, had fine blanched *Cardoons*.

FRENCH CHRYSANTHEMUM SOCIETY.

At Lyons on November 3 to 12 the above society, which has only been established four years and which has now held its fourth annual show and congress, and numbers nearly 600 members, had a most attractive gathering, at which a number of well-known *Chrysanthemum* admirers and growers of various nationalities were present. The schedule made full provision for a representative exhibition, and there were numerous works of art, gold, silver-gilt, and silver medals offered as

prizes in the various classes. Among the exhibitors of new seedlings, Messrs. Vilmorin and Co., Ernest Calvat, Heraud, de Reydellet, Chantrier, Bonnefons, and W. Wells were the chief, and the floral committee of the society were engaged in a long and somewhat difficult task in making the awards, one of the exhibitors contributing no fewer than fifty-four novelties. Several first-class certificates were awarded to M. Calvat, whose blooms were bright, clean, and fresh, and of gigantic size, being by far the best in the show. Mme. Adèle Cordonnier Wibaux, a fine reddish crimson Japanese with gold reverse; M. O. de Meulenaere, a deep chestnut-crimson Japanese incurved; Mme. Alice Capitain, a pretty sulphur-white, tinted deeper in the centre; Mme. L. Druz, deep apricot-yellow, with golden centre; Salomé, a fine golden-yellow self; Mme. de Franqueville, rosy salmon, with golden reverse; Marquis Visconti-Venosta, deep rosy amaranth, with reverse of silvery pink; and Mme. Victor Delavier, very pale blush, very deservedly received first-class certificates.

In the cut bloom classes there were many exhibits, but the arrangement of them differs considerably from ours here in England, as does the general aspect of the show. In order to prevent any monotony in the arrangement the show is divided into groups of plants and blooms, which are arranged in beds on the level of the ground, and in some cases after the judging is over to improve the general effect, exhibitors' lots are mingled, which renders it difficult sometimes to particularise. Inasmuch, however, as the French exhibitors are not generally known to the main body of our growers and readers there will be no need to deal with the exhibits separately, and it must suffice to say that in the sections for cut blooms the best from an English point of view were such as President Nonin, Oceana, Mme. M. Ricoud (a beautiful shade of bright pinkish rose), Mme. Rozain, Mme. Deis, Secrétaire Rivoire, Mrs. C. Harman-Payne, M. Louis Rémy, G. J. Warren, Marie Calvat, N.C.S. Jubilee, &c.

Chrysanthemums in pots were largely represented, as is always the case at these continental shows. At Lyons a great feature is the large-flowered dwarf-growing varieties, and of these there was almost any number. M. Choulet, of the Municipal Gardens at the Park Tête d'Or, has practised this method with much success, and it seems to be generally adopted by his fellow townsmen. The city of Lyons contributed (not for competition) a large oval bed of these, and among them varieties such as Le Colosse Grenoblois, Mrs. C. Harman-Payne, Van den Heede, Mme. E. Roger (the curious green variety), Mme. Deis, M. Louis Rémy, Iséroite, Surpasse Amiral, Australian Gold, Mme. Gustave Henry, Eliane (new), Souvenir de Molines, Mme. Carnot, Mme. Aristide Rey (new), and others figured very conspicuously. Messrs. Rivoire and Son, M. Rozain, M. Bouchard, Messrs. Biessy and Combet, and M. Charmet also were prominent exhibitors in the group classes. In the middle of the hall was a large circular group from Messrs. Vilmorin, Andrieux and Co., very bright in colour and well arranged. The principal varieties known to English exhibitors that it contained were N.C.S. Jubilee, Phœbus, Pride of Madford, Marie Calvat, Mme. Ed. Roger, W. Seward, Reine d'Angleterre, W. Tricker, C. Davis, Mrs. C. Harman-Payne, General Paquier, and President Nonin.

Very charming were some of the floral decorations, and in this department Messrs. Biessy and Combet distinguished themselves by the light, delicate arrangement of some of their vases and baskets. Dinner-table decorations were also included. Miscellaneous groups of Palms, Ferns, fine-foliaged plants, &c., were not wanting. Some Dahlias, Cannas, Cacti, standard Roses, and other things of the kind were arranged round the sides and ends of the show room, and lent their variety to the general effect. Fruit was also shown, Grapes, Apples, and Pears being the chief, M. Henry Fatzner, of the Forceries de l'Aisne, making a fine display of his Cannon Hall

Muscat, Gros Colman, Black Alicante, and Muscat of Alexandria Grapes, about a dozen bunches in all, under a glass case, and for which a special award was made of a work of art in bronze. In the grounds there was a good display of Magnolias, Bamboos, conifers, ornamental shrubs, and gardening tools and implements.

The conference was an important part of the proceedings and extended over two days. M. Viger occupied the chair at the first sitting, and on the platform were representatives of the English, French and Italian National Chrysanthemum Societies. A welcome was given by M. Maxime de la Rocheterie to those present. Subjects of interest relating to the popular flower were discussed, M. Gérard leading off with a paper on cross-fertilisation, and showing the influence of the male and the female parents on the progeny. Following him came M. Chiffot, who discoursed on insect pests and maladies, and of which he said there were forty-one. The rust and remedies were explained and discussed, and this gentleman's paper was rendered the more interesting by a series of coloured drawings of the various insects and diseased leaves upon which he was treating. Other speakers followed. On the second day the conference was resumed, M. Maxime de la Rocheterie presiding. Further papers and discussions ensued, and these being brought to a close, the numerous company adjourned to the Park Tête d'Or, there to inspect the municipal greenhouses, the winter garden, the botanic garden and the alpine garden. A lunch to the jury—a grand banquet presided over by M. Viger—formed part of the entertainment, and as the weather was exceptionally favourable even for that district, the whole proceedings were specially enjoyable.

National Chrysanthemum Society.—Owing to pressure on our space we have been obliged to hold over the report of this show till our next issue.

NOTES OF THE WEEK.

Begonia Gloire de Lorraine.—It is doubtful if any other variety can equal this lovely Begonia when grown in small pots (4-inch to 5-inch) for autumn decoration. It is a continuous bloomer over a prolonged period and is a good lighting-up colour, which is most essential.—GROWER.

Clerodendron trichotomum, referred to in last week's GARDEN as flowering in Devonshire, also flowered well at Penrhyn Castle, Carnarvonshire. Two small trees, each about 7 feet high, were covered with the pretty and very sweet-scented blossoms during September.—P., Penrhyn Castle, N. Wales.

Salvia Pitcheri.—If not remarkable for compactness of habit, this pretty Sage is certainly noteworthy for its spikes of distinctly-coloured flowers. Small though these undoubtedly are, they are singularly attractive, and, appearing here and there amid foliage of quite distinct character, the result is very pleasing.

A heavy rainfall.—Late in the afternoon of Friday, the 2nd inst., a batch of 8½-inch pots with watertight bottoms was placed in the open, being quite empty at the time. There were possibly a dozen or so of this size. Rain fell more or less steadily all Friday night, and the following morning nearly 4 inches of water were found in them. As it still rained and showed no sign of abatement, the pots remained, and on Sunday at 10.30 a.m. were full to the rim.—E. J., Hampton Hill.

Tibouchina macrantha.—The large saucer-like blooms borne by this are always admired. The plant is particularly fine in the waning months of the year, not merely for its attractiveness as a flowering plant, but for its distinct and striking aspect. Most frequently the plant is seen in small bush form, which is less striking than as grown at Kew. Here, trained near the roof-glass, the plant seems quite content, as evidenced by the large number and the fine colour of the flowers produced week by week. That planting out agrees with it is plain, and worthy of imitation.

Anomatheca cruenta.—This charming little South African bulb has seeded freely with me this year on a sunny rockery. I grew all my bulbs from

seed sent me by a Cornish friend in whose garden it grows like a weed. I find no difficulty in raising them, and, unlike most bulbs, they bloom freely the year after being sown. I sow out of doors where they are to bloom in April, and having more seeds than I can use I shall be pleased to forward some to any of your readers who care to have same as long as my supply lasts.—HERBERT E. MOLYNEUX, Brantwood, Culverden Road, Balham, S.W.

Primula floribunda.—This is certainly one of the most abundant bloomers of the whole genus, and, with the exception of P. obconica, will hold its own against all comers. As one of those easily managed plants that come so freely from seed it is a desirable subject in small pots where fringe plants are employed in the conservatory, or in groups and such like. A weak point, perhaps, in this species is the shortness of the main flowering stem, and greater boldness in this respect would be a gain. There is a pale primrose-coloured form of this plant, and, though somewhat larger in the blossoms individually, it is perhaps lacking the chief quality of the original kind, viz., its striking richness.

Anemone Pulsatilla.—I notice a note in your number of 4th inst. from J. Cornhill on the results of sowing home-grown seed of this beautiful Anemone. I had some very good seed from one of my plants this year and sowed them as soon as ripe. They came up even sooner than Mr. Cornhill mentions, and I have now a good stock of this valuable Anemone.—G. W., Mount Usher, Ashford, Co. Wicklow.

—Although I have raised this Anemone from seed, I have never had it germinate so soon after being sown as your correspondent Mr. J. Cornhill. I must admit, however, that my usual practice has been to sow in spring from want of the accommodation for a number of small seedlings in winter. Fresh seeds do not always remain for the twelve months mentioned by your correspondent. Frequently seeds obtained from seedsmen are, however, quite that time before germinating. As a general rule, few of the Anemones germinate so quickly as A. coronaria. Your contributor's experience is likely to be useful to some who may wish to grow the Pasque Flower from seed—a convenient way of raising a number of plants at a small cost. If I remember aright, the shortest time taken by A. Pulsatilla to germinate here was about two months.—S. ARNOTT.

Sternbergia lutea.—Here on a limestone soil Sternbergia lutea comes up year after year without any attention being paid to it. Last year the soil of the border had to be raised, and the bulbs were dug up and replanted, to the manifest improvement of the flowers this year. Two flowers among the lot turned up of a large size and decided Tulip shape. These I apprehend to be the true S. macrantha, a somewhat rare species. Is anything known of S. colchiciflora with a Jasmine-scented blossom? I have not been able to obtain it.—SHERBORNE, Gloucester.

—Unfortunately, Sternbergia lutea does not appear to be any the better of the plan of leaving it undisturbed here, although "W. R." has proved it to be efficacious with him. I have bulbs here which have not been moved for several years, but these have not bloomed since the year they were planted. The hope of inducing them to flower by adding lime to the soil will lead me to persevere. I desire, however, to thank your contributor for his note. The question of climate, which would occur to one, does not seem to apply in my case, as in a garden in the same county, with an almost identical climate, the Sternbergia flowers regularly and freely.—S. ARNOTT.

—When "W. R." on page 364 tells us that this bulb flowers every year in his garden, and that therefore it ought to do the same in Mr. Arnett's, he makes the error—too common with correspondents of gardening journals—of omitting to tell us where his garden is. It makes a great difference whether it is in Caithness or Cornwall, in Lancashire or county Cork. If, however, by the blue Bindweed "W. R." means the perennial Convolvulus mauritanicus, and not either Convolvulus major or C. minor, which are also blue Bindweeds, we may infer that the climate of his garden is mild, otherwise that Bindweed would not stand the winter. The fact is that the flowering of all Sternbergias in British gardens is subject to the soil and temperature of each garden. Nothing will make them flower regularly in my garden in Cheshire, where the mean summer temperature is low and the subsoil cold and wet.—C. WOLLEY-DOD, Edge Hall, Malpas.

* * The district referred to is Sussex; soil

rather heavy. We have seen it flowering very freely in Cambridgeshire, where the soil is quite sandy. A fault is not leaving it long enough in the same place.—ED.

Eranthemum pulchellum.—Formerly this well-known plant was justly prized for its free flowering and the colour of its blooms. Now, however, the plant is less frequently seen. The blue-flowered plants of late autumn and winter are not numerous, and this one at least, in consequence of its simple requirements, may be had in bloom for a long time. It is when associated with other things in the conservatory, where plants of a more or less enduring nature are necessary, that the above is found useful. Careful watering is necessary, water being given only to quite dry examples.

Notes from a Cornish garden.—The seeds of *Clematis graveolens* were only sown here in April, and this October it has flowered well out of doors. *Tacsonia Van Volxemi* was planted out of doors on a south wall two years ago, and has had no protection since. Three weeks ago two flowers came to perfection. *Senecio pulcher* is blooming for the second time, and *Ipomœa cerulea* has at last ripened its seeds out of doors. In the cool house *Campanula Vidali* is also flowering for the second time. The first flower-spikes were none of them cut down until the seeds were ripe. *Cestrum aurantiacum* is particularly free-flowering this autumn.—C. R.

Chamærops Fortunei in fruit.—I send herewith a photograph of a plant of *Chamærops Fortunei*, one of two that have fruited here this season. This Palm usually blooms freely, but it was only this year I noticed that two of the specimens had female flowers. A fine, still day was chosen, and these bunches were fertilised with the abundant pollen from a male plant. The seeds, although plump and well filled, are not yet ripe, nor is it likely they will ripen now, the season being so far advanced, but it is interesting to see the Palms with these great masses of fruit. The photograph was taken by the Rev. Mr. Huband, of Killiskea, Ashford, Co. Wicklow.—GEORGE WALPOLE, *Mount Usher, Ashford, Co. Wicklow.*

November flowers in Devon.—I am forwarding you herewith a specimen of South Devon November flowers of the open air in the shape of a spray of *Lapageria rosea*, a large plant of which is blossoming on a north wall at Gnaton Hall, near Plymouth. Many finer flower-sprays than that sent are now hanging on the same plant, but at too great a height to be easily accessible. *Lapageria alba* is also in flower on the same wall. The single white Macartney Rose is blossoming freely on a wall hard by, while on southern walls *Ceanothus Gloire de Versailles* and *Abutilon vexillarium* are in bloom, and a large bush of the Mexican Orange Flower (*Choisya ternata*) in another part of the garden is freely studded with its white bloom-clusters.—S. W. FITZHERBERT.

* * Splendid in colour and in all ways.—ED.

Alyssum maritimum compactum.—There seems to be a diversity of opinion among your correspondents as to the origin of this plant; perhaps I can throw some light upon the matter. About eight or nine years ago I obtained from a friend, an amateur in the country, a few cuttings of this *Alyssum*, which I propagated and used for a small bed. Since then I have grown it extensively each season. Last spring I planted out over 3000 of it, and also distributed it in some other parks and gardens. It is very effective as an edging or as a groundwork for *Begonia* beds. I treat and propagate it precisely the same as *Lobelia*, the white variety of which I have quite discarded in favour of the *Alyssum*, which is a totally different thing from the old ragged annual; in fact, there is no comparison between the two.—W. B. GINGELL, *Ravenscourt Park, Hammer-smith.*

Exacum macranthum.—The stove flowering plants that can equal this in richness of colouring are few, and, although very easily grown, the plant is, perhaps, among those things rarely seen in flower save now and again in some botanic

collection. Why the amateur and the private gardener generally cultivate it so sparingly is not easy to say. By regulating the time of sowing the seeds it is possible to have quite a succession of flowering plants during the autumn months. Well-grown examples of this fine stove annual will attain to a foot or 18 inches high. Though a native of Ceylon, the plant was originally discovered at a considerable altitude and on this account will be found to do well in a warm intermediate house, rather than in the warmest part of the stove. A point to guard against is that of crowding the seedlings while yet small. Above all things it is necessary to keep the young plants moving. The corolla when fully expanded is about 2 inches long, divided into five broad segments. Its colour is of the most intense purple-violet, very rich and striking. The flowers, borne in a terminal corymb, are rendered all the more attractive by reason of the rich yellow of the prominent anthers.

A blizzard in Dublin.—A blizzard which passed over Dublin lately fell with especial violence upon Trinity College, whose grounds presented an appearance of extraordinary disorder and devastation. The portion of the park known as the "wilderness" was totally wrecked, nearly all of its fine old trees having been blown down. Some were uprooted, others—and these the largest—were snapped across, and in many cases trees were carried a distance of 15 yards or 20 yards. A great deal of injury was done in the college park and Fellows' garden. The force of the wind bent and twisted into almost every possible shape the wire railings along the engineering school. The damage done is very considerable, but the amount has not yet been estimated. Nothing, however, can replace the grand old trees which were such an ornament to the college grounds.—*Times.*

* * I am very sorry to say the above paragraph is too true. On Friday, November 3, at 11.30 a.m., a sudden blizzard, or cyclone, swept over the college park, uprooting and breaking off Elms, Willows, Hawthorns, Sycamores, Maples and Poplars. Some of the old Elms and Poplars were decayed and of no great ornamental value, but fine Thorns, Canadian Maples and a spreading Wych Elm beside the "broad walk" could ill be spared. Fortunately, bad as the results of the storm proved, its track was a limited one, 60 yards or 70 yards only, and so a far larger number of trees escaped than was injured; still in a park lying as it does in the centre of the city the loss was lamentable and in some cases well-nigh irreparable. The wind and rain, sleet, &c., lasted about an hour, but the actual damage to the trees took place in half a minute at the outside.—F. W. B.

Crocus longiflorus.—Some of the autumn Crocuses are not yet cheap enough to plant in sufficient quantity to delight us in fine autumns with a mass of their beautiful flowers. There are, however, some species not a whit less charming than those of high price, which are obtainable at a cost which would permit of their being planted in a free manner in many gardens. *Crocus longiflorus* is one of those. It is considerably more expensive than the spring-flowering Dutch Crocuses, but, when it can be procured from British firms of the highest class at a cost of 5s. 6d. per 1000, or less, it cannot be said to be a price beyond the reach of the average lover of flowers. It is, in point of beauty, worth far more. There are, as this is written (on November 6), several clumps in bloom here. Although the weather has been very stormy for some days, the scant sunshine of to-day shows them in a bright and pleasing aspect, calculated to yield us more than a passing pleasure. *Crocus longiflorus* is truly a charming species, charming alike in its rosy lilac flowers and in the fragrance they possess. It is of remarkably free-flowering habit, and only needs to fully appreciate its beauty that the flowers should spring through a carpet of some low-growing plant which is not leafless when the *Crocus* is in bloom. It is abundant in South Italy, Malta, and Dalmatia. It was classed by Mr. George Maw in the section named Reticulati,

on account of its corm tunics being composed of reticulated fibres. One can hardly refrain from expressing a hope that those who want to enjoy their gardens to the fullest extent will pay more attention to such flowers as this.—S. ARNOTT, *Carsehorn, by Dumfries, N.B.*

Crocus lævigatus.—Under this name I have had for a few years a little *Crocus* which is almost an ideal one for blooming in autumn. It came to me from a trade source which is usually a reliable one, but the colour does not tally with that given in the description of the species by Mr. J. G. Baker in his "Handbook of the Iridæe." That work states that the segments are "white, concolorous, or the outer with three to five distinct stripes of lilac down the back." In my specimens there is a much larger proportion of lilac on the flowers than one would gather from the description by Mr. Baker. They, however, nearly approach the colour given in the catalogue of the firm from whom my corms were purchased, and the vendors are usually so careful in verifying the names of the plants they sell, that I think this *Crocus* is correctly named. The general character answers in other respects than colour to the description in the handbook by Mr. Baker, and there is considerable variation in the colouring of the Croci in their native habitats, so that one is inclined to rest satisfied with the name given. One advantage this *Crocus* possesses to justify the remark with which this note opens, i.e., that it is almost an ideal one for blooming in autumn. This consists in its exceedingly dwarf habit and the shortness of its tube. It is thus less exposed to the wild autumn winds and gales which, combined with the heavy rains which so often accompany them, are the potent enemies of the autumn-blooming Crocuses. Compared with some of the other species which come into bloom or are yet in flower beside it, the *Crocus* under notice is certainly small, but its less liability to premature destruction and its pretty appearance are merits of no slight degree. It also differs from most of the others in producing its narrow, grassy leaves along with the flowers. This is, I think, a pretty feature which adds to the beauty of the little flowers. *Crocus lævigatus* is said to come from the Greek mountains and the Cyclades, where, we are told, it grows from the sea level up to 2500 feet. It is quite hardy with me and never receives protection of any kind, although its flowers would probably be purer in colour if protected by a sheet of glass.—S. ARNOTT, *Carsehorn, by Dumfries, N.B.*

Hardiness of the Japanese Maple.—I am astonished that a correspondent on p. 312 of THE GARDEN considers the Japanese Maples tender. Since 1882 about twenty of these shrubs have been planted out here, and though they had several times to endure 6° Fahr. without a cover, they never suffered cold and are in robust health.—O. F., *Lehenhof.*

The weather in West Herts.—The past week was very warm, wet, and sunless. On two days the shade temperature rose to 60°, which is a very high reading for so late in the year. With one exception the nights were also very unseasonably warm. Both at 1 foot and 2 feet deep the ground is at the present time about 4° warmer than is seasonable. During the week rain fell on all but one day, to the aggregate depth of over 2½ inches, which is in excess of the average quantity for the whole month. For six minutes on the evening of the 3rd the rain was falling at the unusual rate of over an inch an hour. Since the month began eleven gallons of rain-water have come through the heavy soil gauge, and nearly as much through the light soil gauge. Both gauges are a yard square. In the last six days the sun has shone brightly for altogether only 3¾ hours.—E. M., *Berkhamsted.*

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THE GARDEN.

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INDEX.

(Illustrations in Italics.)

Flower:—	Berks, November flowers in .. 391	Figs casting their fruit .. 397	Choisya ternata 402	Obituary:—
Bulbs, planting small and choice .. 390	Campanula balchianensis .. 392	Grapes, decorating exhibition .. 394	Crabs, some ornamental .. 400	Shrimpton, Mr. J. .. 408
Crown Imperial, dark-flowered .. 390	Chrysanthemum Etoile de Feu .. 391	Grapes, winter .. 397	Hibiscus coelestis .. 401	
Daisies, Michaelmas .. 390	Colchicum Sibthorpi .. 391	Nectarine Spencer .. 396	Shrubs, ornamental, of October .. 402	Miscellaneous:—
Funkia subcordata grandiflora .. 390	Crocus asturicus .. 392	Peach and Nectarine trees, young and old .. 395	Viburnum plicatum .. 402	Antholyza aethiopica vittigera .. 408
Montbretias, hybrid .. 389	Nerine roseo-crispa .. 392	Peaches, two good late .. 396	Yew tree poisoning .. 402	Bamboos in a scashore Cornish garden .. 399
Plants in bloom in the Isle of Wight .. 390	Nerines, seedling .. 392	Pear Aston Town .. 398		Birds in gardens, useful ones .. 403
Poppy, Mr. Moon's hybrid .. 390	Pulmonaria saccharata picta .. 392	Pear Flemish Beauty .. 397		Ferns, Tree, and Japan Musa in an old quarry (Cornwall) .. 393
Pyrethrum uliginosum .. 390	Statice Butcheri .. 392	Raspberries, autumn-fruiting .. 395		Garden, in a Cornish .. 393
Tropaeolum tuberosum .. 389	Sternbergia lutea .. 392	Strawberry Latest of All .. 397		Garden, in a Cornish .. 404
	Violet Mrs. J. J. Astor .. 391	Strawberries .. 394		Garden, planting a .. 408
Stove and Greenhouse:—	Orchard and Fruit:—	Strawberries, late, on north borders .. 396	Orchids:—	Hydrangeas in wood in Cornwall .. 398
Begonia carinata .. 391	Apple Armorer .. 394		Cypripedium insigne giganteum .. 405	Landscape architects .. 408
Begonia Dregei .. 391	Apple Emperor Alexander .. 395	Garden Flora:—	Dendrobium infundibulum .. 404	Machiae, a labour-saving .. 393
Eucharis amazonica .. 391	Apple Golden Reinett .. 396	Rosa hispida .. 398	Odontoglossum blandum .. 404	Sedum amplexicaule .. 402
Gloriosa virescens .. 391	Apple Mabbott's Pearmain .. 396	Week's Work:—	Odontoglossum odoratum .. 404	Solanum, Jasmine, flowered .. 395
Ixora macrothyrsa .. 391	Apple trees, planting .. 397	Fruits, hardy, work among .. 399	Oncidium varicosum .. 401	Weather, the, in W. Herts .. 408
Rondeletia speciosa .. 391	Apple Washington .. 396	Kitchen garden, work in the .. 400	Societies:—	Women, teaching gardening to .. 408
Room plants, choice .. 391	Apple Wormsley Grange Pip-pin .. 394	Trees and Shrubs:—	National Chrysanthemum .. 405	Woolwardii out of doors (Cornwall) .. 402
Notes of the Week:—	Apples, late dessert .. 398	Bignonia radicans .. 401	Royal Horticultural .. 408	
Begonia Dregei .. 391	Blight, American, treatment of .. 396	Catalpas fruiting .. 401	Public Gardens:—	
Begonia Mrs. Leopold de Rothschild .. 392			Battersea Park, Chrysanthemums in .. 408	
			Chancery Lane, oasis in .. 408	
			Open spaces .. 408	

FLOWER GARDEN.

HYBRID MONTBRETIAS.

SOME gardeners reject these as troublesome, and producing after a year or two nothing but a forest of green Sword-grass and spreading inordinately, but by attending to a few very simple rules they may be made a great addition to the ornaments of the garden. They like moisture and rich soil, and to have their head in the sun and their feet in the shade. In Cheshire they are not absolutely hardy, but only in ordinary winters. A long and severe frost kills them outright if not littered over.

To make them do well, the chief point is to keep them thin, and so they must be divided every year. This may be done at any time in autumn before the ground is frozen up. My practice at Edge after digging them up—suppose there are twelve stalks, that is, twelve bulbs in each clump, with three or four young points to each bulb—is to have fifty or one hundred pots ready and to put three bulbs into each pot, filling up with any waste soil, drainage being superfluous. The less they grow before March the better. They must not be cut down till spring. When all the pots are full they are placed together in some sheltered waste spot out of doors and well watered—for if kept dry they die—then they are covered with a foot or two, according to weather, of dry leaves or other litter, enough to ensure their safety from frost. By the end of March they are safe, and may then be planted out anywhere, letting the bulbs be at least 6 inches deep, either amongst herbaceous plants, which they like, or amongst low shrubs. I have some in beds of dwarf Roses, where they do and look very well. As they increase at least four-fold every year, the gardener must harden his heart and

not be tempted to let them grow more densely, but as he will find that most of his friends have as many as they want, throw the surplus on to the rubbish heap or the weed bonfire. I find one morning in each year enough to dig all up and fill a hundred pots, for the work may be done in the roughest and most hasty way without detriment to the welfare of the bulbs. Indeed, I have sometimes buried the clumps in a soil heap for winter, littering them over as described, and planting the bulbs out by threes in spring. The main objects are not to let them get frozen and not to let them get dry or grow during winter. I generally also replant three bulbs where I dig up each clump. If the winter is mild, these survive and the pots are not wanted; if they are killed, the pots take their place. They flower better if a spadeful of rich stuff is put in where each pot is planted.

If in full sun without shelter at the base the leaves become brown before flowering; if quite in shade, the leaves grow very fine and retain their green to the end of the season, but there are no flowers. M. Lemoine, of Nancy, the raiser, has sent out more than thirty kinds, most of which I have tried. I recommend especially

Etoile de Feu.—Scarlet, A 1 both in colour and habit.

Aurore.—Bright orange and very robust, growing more than a yard high.

Drap d'Or.—Bright yellow.

Solfatare.—Pale yellow.

Feu d'Artifice and Bouquet Parfait.—Mixed orange and yellow.

Potsi grandiflora.—Scarlet outside, yellow inside, distinct and free-flowering, with ornamental seed-heads.

Besides the hybrids there are *Crocsmia imperialis* and *C. maculata*, with larger flowers than any of the hybrid Montbretias, but flowering later and rather less hardy.

Edge Hall, Malpas. C. WOLLEY-DOP.

TROPEOLUM TUBEROSUM.

MR. ARNOTT'S note (p. 249) on the non-flowering of this plant in his neighbourhood must have caused surprise to growers of it in various parts of the country, particularly those in Scotland, who experience no difficulty in getting it to grow and flower freely. It is well known that soils and climatic conditions prevailing in some districts are more favourable to the well-doing of certain plants than they are in others, and in this the *Tropeolums* are, perhaps, more fastidious than any other genus—*T. speciosum* especially so—but I was unaware that the variety under notice shared in this, as it succeeds well here in any position, and never fails to elicit admiration from the numerous visitors who pass through these gardens during the summer and autumn months. To the frequent inquiries as to the necessary treatment of the tubers and the methods of planting to ensure satisfactory results, I have always recommended it as the best and most easily grown of any of the summer-flowering creepers; but now that Mr. Arnott has enlightened us upon its behaviour around Carsethorn, I fear this laudation has been carried rather too far. It has been grown here for several years in very diverse situations as to shelter and aspect, and for covering bare walls, fences, or arbours for several months of the year very few are equal to it, and it requires but little attention. Flowering usually commences in July and continues until November, according to the situation of the plant and the amount of sun-heat available. Some of the fruit tree walls here are of an ancient style of construction, through which several wide doorways or arches giving access to the different departments are prominent features. Over these a wire or string following the curve of the arch is fixed, and the tubers being planted at the base, the shoots as soon as they appear and are of sufficient length are tied to these. Afterwards they have pretty much their own way, and ramble at will until the keystone is reached. Being planted on both sides of the arch, it is obvious that those on one side must receive more benefit from the sun than those on the other, but, with the exception of earliness, very little difference can be detected.

One of these growing on the east side and but a few feet distant from an intersecting wall in a southern direction is now (October 23) at its best, and on a 5-foot length of stem is bearing upwards of a hundred blooms, which for size, freshness, and colour are equal to any that I have ever witnessed. This plant, owing to the position it occupies, has probably never received the direct rays of the sun; certainly it has not done so for many weeks past. For twining around the pedestals of flower-vases, pillars, or sculpture work, this plant is most useful.

The culture followed here is to lift the tubers when the foliage is destroyed by frost and store them in company with Begonias, Dahlias, and similar roots until March or April, according to the weather. In planting out, a shovelful of good sandy soil is placed around the tubers, which are left about 3 inches deep when finished. Nothing else beyond tying the shoots is attempted or required. Such an expert hardy plant grower as Mr. Arnott should try this plant in his own garden, as, seeing that Carsethorne and this place are nearly in the same latitude and the climate very similar in both, a fair amount of success would probably attend his efforts.

JAMES DAY.

Galloway House, Wigtownshire.

Funkia subcordata grandiflora.—Because this plant when pot-bound continues to send up flowering material year after year, this enduring characteristic is too frequently interpreted the wrong way. It is a plant that quickly puts on a root-bound condition, yet at the same time it well repays very liberal treatment. For example, when the plants have finished their flowering in the autumn, a periodical shift to a larger pot and fresh soil will not be lost upon them. If this is done and the plants plunged in the open, covering the crowns deeply, greater vigour may be looked for the following season. This may be done every other year. Liberal supplies of manure water during growth will also assist this useful plant.

Michaelmas Daisies.—The importance of choosing a selection of these from flowering plants in the nursery is probably greater than in the case of any other plants, owing to the freedom with which they hybridise. Notwithstanding the labours of the conference, erroneous names are still too frequently found in trade catalogues. *A. densus*, for instance, is labelled *dumosus*; Robert Parker is sometimes called Chapmani, whereas the plant formerly known as Chapmani is now *lævis*, and so on. Had I to start again forming a collection I should select a few distinct species, and from the self-sown seedlings grow on and select the best. I have now several distinct forms obtained in this manner. One, a white form flowering in October, having flowers somewhat after the style of *acris*, but with more rays, branching somewhat like *horizontalis*, and forming a rounded, symmetrical bush about 2 feet high, is very effective. Another has the flowers of *horizontalis* with a tall (4 feet) branching habit rather like *polyphyllus*. A third has rosy purple clustered heads of flowers similar to *A. Novæ-Angliæ*, but with the habit of *Novi-Belgii* type, if there is one. Ordinary varieties, many equal to named sorts, are plentiful, but of course rigid selection is necessary. The sorts I should select as distinct are *vimineus*, one of the most graceful and attractive; *lævis*, a tall, spreading, sky-blue sort; *lævigatus*, rose, of dwarf, bushy habit; *Shorti* (or what I have under that name), one of the cordifolius section, dwarf and spreading, flowers of a lovely blue tint; *polyphyllus*, tall, white; *Amellus*, cordifolius, Coombefish-acre, and last, but not least, *A. spectabilis*, which seems to be less known than it ought to be. This is very distinct from most, forming a tuft of large leaves close to the ground and throwing up almost leafless branches with dark, glistening purple flowers. I also have a fine late-flowering

sort I got from Mr. John Wood, of Kirkstall, which I only know as Mr. Wolley-Dod's best blue. Just now it is in perfection. I do not much care for the white varieties of *Novi-Belgii* on account of the blackish centres so many develop in a few days. They quite spoil the appearance of the bush. I should like to know a variety in which the centres turn reddish brown only, as in *polyphyllus*.—T. J. W., Woodside Park, N.

PLANTS IN BLOOM IN THE ISLE OF WIGHT.

It may be interesting to some of your readers to study the effects of the unusually hot and dry summer of 1899 from such evidence as is afforded by the following list of plants actually in flower on November 1 in this garden. The ground, a few hundred yards from the sea on the undercliff, is on a steep slope facing south, and up to September, 1898, was waste ground, thickly overgrown with weeds and Brambles. Nearly all the plants mentioned were planted out between October and January, but some few, notably *Lasiandra*, *Sparmannia*, *Abutilon*, *Plumbago capensis*, *Heliotropes*, *Bouvardias* and standard *Geraniums*, have not yet endured a winter in the open ground. Very few annuals are grown here, and many perennials and bulbs being young and small when put in have not yet attained sufficient maturity to add to what in another year should be a much richer list.

Abutilons, two species, white and yellow	Gaillardias
<i>Amaryllis lutea</i>	<i>Helonium grandicephalum</i>
<i>Anagallis grandiflora</i>	<i>*Hypericum Moserianum</i>
<i>Arbutus coccinea</i>	and <i>H. elatum</i>
Asters (several)	<i>Heliotropes</i> (standards)
<i>Bouvardia triphylla</i> and <i>B. Vreelandi</i>	<i>Ipomoea atropurpurea</i>
<i>Boussingaultia baselloides</i>	<i>Lasiandra macrantha</i>
<i>Cassia corymbosa</i>	<i>Lithospermum prostratum</i>
<i>*Cimicifuga japonica</i>	<i>Lobelia laxiflora</i>
<i>Cistus formosus</i>	<i>Leonitis Leonurns</i> (buds just opening)
<i>*Coronilla Emerus</i>	Pansies
<i>Cannas</i>	<i>Pentstemons</i>
<i>Coreopsis</i>	<i>Phlox</i> (several)
<i>Cyclamens</i>	<i>Phygelius capensis</i>
<i>Convolvulus mauritanicus</i>	<i>Polygonum baldschuanicum</i>
<i>Colebimma</i>	<i>Physianthus albens</i>
<i>Desmodium penduliflorum</i>	<i>Plumbago Larpentæ</i> and <i>P. capensis</i>
<i>Diplacus glutinosus</i>	Portulacas
<i>Delphiniums</i>	<i>*Santolina incana</i>
Dahlias	<i>Statice profusa</i> and <i>*S.</i> <i>incana</i>
<i>Elmagnus macrophyllus</i>	<i>*Spiræa Bumalda</i>
<i>Erigeron splendens</i>	<i>Sutherlandia frutescens</i>
<i>*Erythrina crista-galli</i>	<i>Sagittaria montevidensis</i>
<i>Echinacea purpurea</i>	<i>Salvia angustifolia</i> and <i>*S. patens</i>
<i>Erysimum helveticum</i>	<i>Tritoma nobilis</i>
<i>Fuchsias</i> (several)	<i>Tuberoses</i> (still very fine)
<i>Gazania latiflora</i> and <i>*G.</i> <i>nivea Couronné</i>	<i>Veronica melensis</i> and <i>V. salicifolia</i>
<i>Geraniums</i> (Ivy-leaved)	Violets
Mme. Crousse and Souvenir de C. Turner	<i>Zauschneria californica</i>
<i>Geraniums</i> (standards)	

* A few small late or abnormally early flowers only.

Freecias, which bloomed freely after being out last winter, are now showing leaves. *Hyla arborea*, the green tree frog, has bred here during the summer, and after an interval of disappearance, one young frog and two tadpoles were seen in the tank lately, the majority having already hibernated.

HENRY COOK.

Belvedere, St. Lawrence, I. of Wight.

Pyrethrum uliginosum.—That cutting back stems of this tall-flowering, tall-growing perennial may not be desirable in Scotland it is easy to understand. But in the south I have often found it to be capital practice, as here the shoots that have broken out from the shortened stem have flowered very little later, indeed almost simultaneously with the uncut stems. But if anyone will when the stems are 2 feet in height take off

the tops 6 inches long, set them singly into 3-inch pots as cuttings, and root them in a close frame, he will find that these, either grown in pots a couple of sizes larger and flowered in the greenhouse or planted outdoors, will bloom quite dwarf and make most useful plants. I prefer to have them, however, kept in pots, as under glass they bloom for a long season.—A. D.

MR. MOON'S HYBRID POPPY.

I AM glad to learn that Mr. Moon actually fertilised *Papaver rupifragum*, or rather *P. orientale bracteatum*, for as he distinctly says (p. 365), "my plant of *P. rupifragum* has never produced any seed itself." It may be, however, that it does so if fertilised with *P. bracteatum*. Will Mr. Moon still further oblige and enlighten us by saying which of the two parents is the seed-bearer and which the pollen parent in the case of the beautiful hybrid illustrated. According to Mr. Carrington Ley, however, it seems that spontaneous or accidental hybrids do occur, and also that some individuals of *P. rupifragum* after, as is presumed, a previous pollination continue to produce hybrid seedlings. This is a very perplexing statement, and may, as I said before, be due to the wind or a lucky fly carrying pollen unknown to him. Otherwise it seems inexplicable why one plant of *P. rupifragum* produces hybrid seedlings in his garden and elsewhere, while "several other plants" of that species in the same garden give seedling reproductions of itself pure and simple so freely as to become "almost a nuisance." In one case we have Mr. Moon's hybrid produced by actual hybridising or pollination, and in Mr. Ley's case we are asked to believe that a similar hybrid occurs without immediate pollination, but I think that wind or insects must have carried out that operation unknown to Mr. Ley. In any case I cannot believe in pangenesis as a cause of his *P. rupifragum* continuing to produce hybrids. I shall be very glad of the seeds Mr. Ley is so kind as to promise me, and hope to experiment in other ways likely to throw additional light on this curious and complicated question. The flowers of nearly all the Poppies are so much frequented by pollen-eating flies and minute beetles, that the wonder is there are not more hybrids in this genus. Even *P. rupifragum* itself may possibly be a fertile natural hybrid, in which case one might the more readily understand the vagaries of Mr. Ley's plant. Nature is vast and often inscrutable, and it is an axiom of mine that "Nature does everything sometimes," by which I mean that a plant will naturally seed freely in one place and even produce hybrid progeny and fertile seeds, though as a general rule it may not do so in other places even when carefully fertilised. We cannot dogmatise on the mere groundwork of our own limited experience, as every observant gardener well knows.

F. W. B.

NOTES AND QUESTIONS.—FLOWER.

Planting small and choice bulbs.—Many choice bulbs, such as some Tulip species, are very small and liable to be disturbed or lost if planted in the open border. To obviate this, I find it answers well to pot them carefully in well-drained pots, which are then sunk a little below the ground level. I have so flowered the tiny-bulbed *Tulipa linifolia*, which had previously failed to bloom planted out in the ordinary way. I am now trying *Tulipa orphanidea* in this way, as this also is very small. It seems to be beneficial in another way—that is, ensuring better drainage and more warmth in the soil by which the bulb is surrounded.—T. J. W., Woodside Park.

Dark-flowered Crown Imperial.—Can anyone give me information about a dark reddish plum-coloured Crown Imperial? I saw one at Kew a few years ago, but as there was no label attached to it I could not ascertain its name. The darkest-flowered sort I have been able to get is the variegated-leaved variety. The flowers of this are much darker than in the ordinary red, and show up conspicuously in the border. The variegation of the foliage is also handsome, making the plant a most effective spring flower.

Since writing the above THE GARDEN has come to hand with the coloured plate of *F. i. longipetala*. This flower resembles that of the variegated variety. Is it in commerce?—T. J. W., Woodside Park.

STOVE AND GREENHOUSE.

EUPHARIS AMAZONICA.

I READ "H. R.'s" remarks on *Eucharis amazonica*, in the issue of September 30, with great interest. I have hitherto considered and treated it as a stove plant, but have often wondered if it really was or not. I should be glad if "H. R." would give us his mode of treating it.—C. R.

*. In the first place it is necessary that the house, though cool, be nicely tempered as regards atmospheric moisture. To attempt to grow it in an ordinary greenhouse where the air is dry and draughty is worse than keeping it in stove heat. A house to grow *Eucharis* properly should have a night temperature of about 55°. It should be provided with blinds to screen the plants from bright sun, and the ventilation must be carefully attended to so that a constant change of air is going on, but no draughts of cold air must reach the plants in winter. Any bulbs that need repotting must be shaken out of the compost at the end of March and be repotted in good fibrous loam, a little peat or leaf-mould, and a sixth part of well-decayed cow manure. Add to this some well-pounded charcoal or crock dust and sand, and an excellent rooting medium will be the result. In potting the bulbs use the 9-inch or 10-inch size, this taking about half a dozen fair-sized bulbs. Drain well and cover the drainage with a little rough Moss or similar material. In potting keep the top of the bulb about an inch below the surface, if possible. But if the bulbs have been more deeply buried, it is not wise to bring them right up at once; do it a little at a time at each potting. Previous to repotting, the plants will have been, comparatively speaking, at rest, and a slight rise in temperature will just give the little impetus needed to start and re-establish the bulbs. Damp the foliage over frequently with tepid water, but keep the roots on the dry side. If the compost is in proper condition at potting time no water need be given for a fortnight, but after this, as the foliage begins to pick up and the plants to grow, gradually increase the supply.

Growth will be rapid all through the summer, and though all the plants will not probably flower at the same time, the great bulk of the blossoms will be produced from the end of July until September, after which a few chance spikes may push up. When growth is well away and until the flowers appear on the spikes, occasional waterings with well-diluted soot water are very helpful. The soot gives colour to the foliage and may be varied by occasional applications of nitrate of soda, say about three times during the season. After the flowers are past the plants make a little more growth, but not much, and it is more in the filling out of the leaves than in producing new ones. By November they should be practically at rest and must be kept well on the dry side, not, however, going to the length of allowing the least shrivelling. The night temperature may now be reduced to 50°, and only increased again as recommended above at the time of repotting. Once in three years is often enough to repot, and a sorting of the bulbs should take place then, bringing all those of flowering size together and growing the smaller ones by themselves. I need hardly add that a clean stock is necessary to success, and all mite-infested bulbs should be thrown away.—H. R.

Begonia carminata.—Of late years we have seen numerous additions to the shrubby section of *Begonias*, many of which are particularly valuable for winter flowering. The variety under notice may be regarded as almost perpetual

blooming, for it will often commence to flower quite early in the summer and continue till nearly the end of the year. This variety was raised from the white-flowered *B. Dregei* crossed with the pollen of the Brazilian *B. coccinea*, well known as a tall-growing species with large drooping clusters of bright red flowers. *B. carminata* is of a more bushy habit of growth, with flowers disposed much as in *B. coccinea*, but of a bright carmine pink colour. It is just now flowering freely and forms a pretty object in the intermediate house.—H. P.

Ixora macrothyrsa.—This *Ixora*, which is quite as well known by the specific name of Duffi as that of *macrothyrsa*, is a truly gorgeous species that differs widely in general appearance from the varieties usually grown. It is of a tall, rather straggling habit of growth. The flowers are borne in huge terminal heads, which in vigorous examples are over a foot across. Their colour is a kind of reddish scarlet that with age changes to more of a crimson tint. It is useless to attempt the culture of this *Ixora* in the shape of little neat bushes as in the other kinds, for its loose style of growth would necessitate continual stopping, and this would be done at the expense of flowers. The plants should be grown on freely, allowing two or three shoots to develop, and in the autumn these may reasonably be expected to each produce a huge head of brilliantly coloured blossoms. Plants that have done flowering should be cut back hard in the spring. This *Ixora* was introduced from the South Sea Islands, and was figured in THE GARDEN over twenty-one years ago.—H. P.

Gloriosa virescens.—The *Gloriosas* are usually treated as stove plants, but a specimen of this kind has been growing during the summer and flowering freely in No. 4 greenhouse at Kew. Though pretty and interesting, it is not nearly the equal of the old *G. superba*, whose wavy petals with their quaint markings combine to form a strange yet showy blossom. *G. virescens* differs therefrom in the segments of the flower being broader, while the petals are not crisped as in the other. The colour of the flower, too, is less bright. *G. Planti* is a form of this plant with reddish yellow blossoms. Considering the numbers of *G. superba* that are imported every year and the extremely gorgeous blossoms, it is a matter for surprise that we do not meet with it oftener. One reason, I think, is that many people attempt to grow it in pots, under which conditions it is seldom satisfactory, for the curiously shaped tubers extend in a horizontal manner.—H. P.

Begonia Dregei.—This pretty species once almost dropped out of cultivation, but of late, owing to the increased interest shown in this section of *Begonias*, it is grown much more than was at one time the case. It is a very useful plant, and of especial interest as being one of the parents of the now universally grown *Gloire de Lorraine*. *B. Dregei* forms a stout, fleshy root-stock (almost a tuber), from whence are pushed up succulent shoots that reach a height of 1 foot to 18 inches. The leaves are rather small, thin, and freckled irregularly with grey, while the small white flowers are very numerous. Whether it will be eclipsed by the new white-flowered form of *Gloire de Lorraine*, time will show. Another hybrid of *B. Dregei* is *B. weltoniensis*, which twenty-five years ago was much grown for market, in the shape of neat little bushes about 18 inches high. The bright green leaves with their reddish stalks were decidedly pretty, and, given much the treatment as a *Fuchsia*, the attractive pink blossoms were freely borne.—T.

Choice room plants.—It is particularly interesting to be reminded of some uncommon plants that do well in a cool room, and to those mentioned on page 324 I would add the distinct and charming *Dracena Godseffiana*, which in the London district has been in a cool room facing the east since last February. During that period it has twice pushed out a number of new shoots. As this *Dracena* is a native of Lagos, in Upper Guinea, the fact that it will succeed under such

treatment is all the more surprising. By artificial light it is particularly attractive, the cream-coloured blotches being very noticeable against the deep shining green of the rest of the leaf. The free, yet twiggy growth eminently fits it for growing into an effective specimen. Plants in dwelling-houses are liable to suffer from draughts, erratic watering (generally in excess), as well as from dust, but if carefully attended to it will be found that many subjects are not so difficult to keep in health as they are usually considered to be.—H. P.

Rondeletia speciosa.—This old West Indian shrub, which at one time was far more popular than it is now-a-days, forms a delightful feature in the greenhouse towards the end of the summer and in autumn, as when grown in the form of a neat bush and studded with its rounded clusters of brightly coloured blossoms it stands out quite distinct from its associates. The colour of the flowers is a kind of vermilion-scarlet with an orange-coloured eye. The variety *major*, which is better known than the typical kind, is of looser growth, while both the clusters and individual blooms are somewhat larger. The colour of the flowers too is rather paler. The blossoms stand well in a cut state, and in the variety *major* may be cut with long stalks, which greatly adds to their value in this respect. After flowering the plants should be kept fairly dry, even though many of the leaves may drop. In the spring it is better to prune them back hard, when in a stove temperature they will break at once and grow away freely. *R. speciosa* is also known as *R. odorata*.—H. P.

NOTES OF THE WEEK.

Chrysanthemum Etoile de Feu.—There is a striking individuality in the colour presented in this kind, which comes midway between that of *Val d'Andorre* and the still older *Tokio*, both bright colours among the so-called red shades. The kind here mentioned, however, is distinct from both, being of a red-crimson tone somewhat, and one that will prove particularly showy under artificial light.

Colchicum Sibthorpi.—Mr. A. Kingsmill sends us from his garden at Harrow Weald some fine flowers of this scarce Meadow Saffron. The flowers of this, which are among the largest in the family, are of a fine lilac shade, beautifully chequered. The blooms previous to opening stand boldly erect on stout stems 8 inches high and are very effective, and, owing to their great substance, last a long time.

Begonia Dregei.—This is a neat-flowered and pretty kind that may be grown in small pots for furnishing and for the greenhouse. The plant is of quite easy culture, and where the rose-coloured *Gloire de Lorraine* is grown freely, this should prove a useful companion. This pretty kind now, however, has a great rival in the white-flowered form of *Gloire de Lorraine* called *Caledonia*, that has recently put in an appearance.

November flowers in Berks.—I herewith send you samples of the variety of flowers which I gathered last evening in my garden. All are growing out of doors, the *Lonicera* and the two *Veronicas* growing against the house. This will show the advantage of having a garden on a hill about 320 feet above "high-water mark," and sheltered from north and east, but, above all, the result of following the "English Flower Garden," my garden even now being gay and sweet.—B., Forest End, Sandhurst, Berks, November 14.

*. Many beautiful plants, too numerous to mention, in fine fresh condition.—Ed.

Violet Mrs. J. J. Astor.—This is one of the most charming additions to the double-flowered *Violets* that has yet appeared. Hitherto the new doubles have had but very minor distinctions; so small, indeed, as not to be discernible in every instance. There is no fear of that in the kind named above, for in colour alone it is quite new, if not indeed unique. The colour may be described as reddish lilac, but is catalogued as pink and heliotrope. In any case the shade is quite novel and distinct from all that has gone before. Not only this, the flowers are very large—quite as

large as the largest double sort we remember, and, above all, deliciously sweet-scented.

Violet La France.—In the singles, this handsome as well as richly coloured form is a great gain. Large as that universal favourite Princess of Wales is, this kind is larger still, and while producing fine long stalks that render it of much value for bunching, it is said to be twice as free-flowering as the other kind named. Varieties that produce large flowers and plenty of them are not long in making way, and we have little hesitation in placing this handsome kind in the very front rank of single Violets.

Begonia Mrs. Leopold de Rothschild.—The fine batch of this brought to the Drill Hall last week by Mr. James Hudson, Gunnersbury House, shows to what an extent this and the parent kind, *Gloire de Lorraine*, are grown at the above place. The large batch of plants, every one of which was in fine flower, made a capital display, at a moment, too, when a large number of the usual exhibitors at the Drill Hall had gone elsewhere. The above-named kind, besides having much larger blossoms of a decided pink tone, possesses a much denser habit of growth, this alone rendering the plant pleasing and attractive.

Statice Butcheri.—For its fine colour and freedom of flowering this Sea Lavender deserves to be extensively grown. To the properties already named should be added dwarfness and adaptability to small pot culture. This from the decorative point of view has a value of its own, and is increased when the plant is one that may be easily grown. Bushy plants little more than a foot high and with freely branching cymes to almost the same diameter may be grown in pots 4½ inches across, so small, indeed, compared with leafage and flower that the pot is hardly seen at all. Thus grown it is certainly one of the most desirable of autumn-flowering plants for the greenhouse.

Campanula balchinensis.—This pretty cross-bred *Campanula* is of twofold value, viz., as a flowering pot plant during summer, and, given greenhouse treatment, as a fine-foliaged plant during winter. To achieve the best results in the latter direction it is not prudent to allow the plants intended for winter work to flower to their fullest extent during summer. Rather should this be checked a little, and so allow a fuller leaf-growth. Even the flower-sprays long retain the pretty variegation which is so strong a feature of the plant, and the varying tints assumed when the plants occupy a light, sunny position in a warm greenhouse alone make it a worthy occupant of such in winter.

Nerine japonica.—Like "H. P." I am unable to flower this bulb satisfactorily. I have four dozen plants purchased two years ago, and up to the present have only succeeded in getting four lots to flower. I have grown them well this past season and given them a thorough rest. I only brought them to the front and watered them when I saw new growth starting. These few were in bloom about six weeks ago. The rest of the batch are growing freely in a midseason vinery on a shelf, but I cannot detect any more spikes of bloom showing. I thought of planting them outdoors close up to a wall and giving them the same position as I do *Amaryllis Belladonna*, which flowers abundantly every year. — J. MAYNE, *Bicton*.

Pulmonaria saccharata picta.—It is doubtful how far we are justified in applying specific names to some of the Lungworts, most of which are so close to the ordinary *P. officinalis* that there is no apparent difference between them except in the form or markings of the leaves. One of these is that known in gardens as *P. saccharata* or *P. s. picta*. Although, like most of the genus, rather a coarse plant, it has its uses. I am induced to write of it at present because of the appearance it yet makes on the top of a bit of rough rockwork, where its large, spotted leaves make it noticeable at a time when most plants of similar style have lost all beauty for the year. I am aware that some do not like plants with foliage marked like

this. One is quite prepared to admit that plants with spotted or variegated foliage may be, and often are, overdone in gardens where one often sees them far too largely used. The specimen to which I refer is, however, not near anything else with similar foliage, and is, all the time it is in leaf, of good appearance. It makes a pleasing combination of silvery grey and green, in some degree reminding one of the more aristocratic *Rex Begonias*. This is much improved when grown, as here, in a dry position. The flowers I do not much care for. — S. ARNOTT.

Nerine roseo-crispa.—The plate in *THE GARDEN* of November 11, and the references to the *Nerines* which have recently appeared in your columns, remind me that little is seen of this hybrid, which has, I think, been in cultivation for some time. It comes from *N. undulata* and *N. flexuosa* if Mr. Baker is correct in his mention of this plant in the "Hand-book of the *Amaryl-lideæ*," page 103. It cannot by any means be called a showy plant, but it has a quiet beauty which is often pleasing by way of a change from the more brilliant flowers under glass at the same time. It was sent me by Mr. J. N. Gerard a few years ago, and with simple treatment in a cool greenhouse has never yet failed to bloom. Its segments are narrow, but light and graceful in appearance and prettily crisped. The flowers are pale pink. The treatment it receives here is very simple and consists in allowing the plants to go gradually to rest in spring. They are repotted occasionally, but not annually, in August or September. At all seasons the pots are kept in a house from which frost is just excluded. *Nerine roseo-crispa* is yet in bloom with me in a greenhouse which has had no fire-heat since spring. — S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Crocus asturicus.—Despite the wild gales and drenching rains which have prevailed for some time, the autumnal Crocuses in sheltered positions in the rock garden have given us bright patches of welcome colour. They have not, of course, been seen at their best, yet one can appreciate their modest beauty even amid the gloomy weather which has prevented them from exhibiting their full charms. In addition to those previously mentioned in *THE GARDEN* the pretty little *Crocus asturicus* has been very pleasing, and, should we have better weather now, will be pretty for some time still. I regret that I have here only one colour in this *Crocus*. It is said to vary from purple to white, through every shade of lilac. Those I have here I should call a deep lilac. It much resembles in its general appearance *Crocus nudiflorus*, from which it differs by its leaves appearing at the time of flowering and by its bearded throat. The anthers are bright yellow or brown; the filaments are white and the stigmas deep orange. According to Mr. George Maw, *Crocus asturicus* abounds in the meadows of the Asturias at altitudes up to 4000 feet, and goes as far south as the Sierra de Guadarrama. Mr. J. G. Baker says it is intermediate between *C. serotinus* and *C. nudiflorus*. It is a neat *Crocus*, not so tall as some, and thus the better able to withstand the rude winds which are the arch enemies of the *Crocus*. — S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Sternbergia lutea.—In the notes sent recently on the above plant I have seen no reference to the form known as *S. l. angustifolia*, a form of *S. lutea* which flowers under ordinary conditions every year, and of which the flowers are quite as fine as those of the typical plant. Some twelve years ago I planted a group of bulbs in a narrow, well-drained border by the side of a house, and took some trouble in preparing the soil, mixing in a good quantity of porous material, broken bricks and mortar, and the staple soil was sandy. These bulbs turned out to be the broad and large-leaved form and they grew splendidly, but in spite of the border being a dry one, in which the *Belladonna Lily* did remarkably well, they only flowered well in four seasons out of twelve, and always after a really roasting summer. In a neighbouring garden less than half a

mile away some bulbs of the narrow-leaved form were planted in very deep and rich soil in a herbaceous border, and though no care was taken to prepare for them in any way, they flowered every year. These were not planted until the present cycle of dry seasons had set in, but it was sufficiently long to prove that the bulbs were far more free-flowering than those I had planted, and that they did not require the same amount of roasting. Perhaps some of your readers who have this plant under observation will compare notes on the foliage borne by their own and other plants which have differed in their flowering capabilities and report on the result. Will Mr. Lynch, of the Cambridge Botanic Garden, tell us something about the foliage of his plants, which, I believe, flower remarkably well? — J. C. TALLACK.

— This pretty autumn-flowering bulbous plant very frequently puzzles the cultivator. Now and again one may come across it a mass of bloom quite unexpectedly, and that without helping one to determine its special needs in the slightest degree. A few years ago I saw quite a plantation of it in a small nursery in the Thames valley. There must have been not less than 300 bulbs in the original planting, and these had increased largely, for there was not a gap anywhere. What surprised me was the fact that they were growing on a shady border. On inquiry I found they had occupied the ground some three years or so, and were planted in quite an ordinary way with no special knowledge at the command of the planter. So far as the soil was concerned, this was light and sandy, resting on a bed of gravel, the bulbs being planted about 5 inches below the surface. Years ago in the then famous nurseries of Messrs. Rollisson at Tooting a batch of bulbs on a narrow south border flowered quite freely. So far as position alone was concerned, these were in just the opposite of the former lot—indeed, were companions in a sunny spot with some clusters of *Belladonna Lilies*. In most instances of success, however, some time has usually elapsed before the plants have become established, and I incline to the opinion that a cold subsoil has more to do with failure than is usually imagined. In gardens where clay abounds it is rare indeed *Sternbergias* succeed. In a trench of lighter and well-drained soil, planted deeply and with plenty of old mortar rubbish, a better opportunity is afforded them. Usually the failures outnumber the successes. — E. J.

Seedling Nerines.—Those who were present at the Drill Hall last week had an excellent opportunity afforded them of inspecting quite a unique lot of cross-bred forms of these beautiful bulbous-flowering plants. As is pretty well known, Mr. H. J. Elwes has been engaged among these plants for some years past, the new and beautiful shades of colour, of which examples last week were brought to the Drill Hall, being some of the results of his labours. In mentioning new colours in the flowers of these plants one cannot omit that remarkable kind bearing the name of Mrs. Berkeley, the intense salmon hue of this being absolutely unique. Hitherto no such remarkable colour has appeared among the selections brought to Westminster, though it is said there are approaches to it somewhat less fine and distinct. Equally attractive is that named Miss Willmott, a bold and telling kind bearing a handsome head of flowers of the most brilliant orange-scarlet. Both kinds possess well-balanced heads of flowers that will be difficult to surpass. Again, too, among the several dozens of seedlings not bearing any distinctive names were many pleasing and attractive forms, not merely showing colour advancement, but a beauty of form or exceptional markings that distinguish them from the older kinds, as well as the earlier seedlings from the same source. Of course, the chief drawback to such things is the great length of time that must elapse before such plants can be put into commerce. The two kinds here mentioned, for example, will probably take many years before a sufficient stock can be secured for distribution, assuming, as is highly probable, that the plants at the Drill Hall were the only ones.

IN A CORNISH GARDEN.

I HAVE been to the south of Ireland and seen the Azaleas there, visited many a sea-shore garden, and naturally made up my mind that I knew something about what our island could do in shore gardens, but I had not the least idea of the beauty to be seen in Cornish gardens, and in none more than this nameless one about which I now have to say a few very inadequate words. The owner, dreading the advent of the tourist, prefers to remain fameless, and so I can have my say without let or hindrance. The

cool country and may be grown round our coast in many places.

It was even more surprising to see out of doors the Japanese Banana quite vigorous here and tall—in fact, as large as I had ever seen it in a conservatory—growing with most graceful effect in a sheltered corner. But perhaps the finest picture of all was that of Tree Ferns in an old quarry, with handsome healthy leaves and fine thick brown stems. The photographer has done his best to get the effect of these from the only available point of view, but the result

self—has a fine notion of wild gardening with such things as Azaleas and Hydrangeas, which the climate encourages him to plant on a large scale, and he would do the same with the Tree Rhododendron (*R. arboreum*) if seedling plants could be got in sufficient quantity. The effect of the Hydrangeas in the woods is very fine, they escaping the winter cold, which cuts them down so often in the midlands; here every shoot blooms. Such plants as the Gunnera and giant Sea Hollies are quite at home, as are also Dracenas and the rarer Yuccas. The beautiful Jasmine-

flowered *Solanum* is, as might be supposed, happy here, and displays a luxuriance of growth, bloom and fruit which are rarely seen further north, graceful as the plant is everywhere. The Bamboo also is quite at home in this beautiful and varied garden, which is also rich in the possession of many Water Lilies that float in a picturesque sheet of water below the house. Where there is so much of sub-tropical, and, as one might almost say, of tropical interest, one would less expect to see great attention paid to hardy plants, but they were as much thought of here as any others, and included a very fine collection of Narcissi, the raising of new varieties of which is diligently pursued and with very interesting results.

V.

A LABOUR- SAVING MACHINE.

IN these days of economy in private gardens anything that will save labour ought to be welcomed on all sides. Nearly all the year round there is much sweeping to be done, and in the case of extensive lawns and long drives the labour expended in this direction falls rather heavily on those responsible for the management of the gardens generally. Any way it is a great relief to have men doing good work in the kitchen and fruit gardens who but for labour-saving arrangements would have been working to less advantage elsewhere.

Mowing machines effected a great saving in labour, also improving the appearance of lawns, and now we have sweeping machines to further economise labour in that direction. The one great drawback to these sweeping machines was the fact that they collected, but did not discharge, rubbish of all kinds, so that considerable time had to be wasted in emptying the receptacles. This difficulty Mr. T. Challis, of Wilton House Gardens, Salisbury, set himself to overcome with very gratifying results. By a very simple, yet clever arrangement, which I shall not attempt to describe, the man who steers the horse and guides the machine can, without changing his position, clear the collect-



Tree Ferns and Japan Musa in an old quarry (Cornwall). From a photograph by G. Champion.

garden is very near a cove by the sea, while the house faces sunwards, and on its cool side is a magnificent curtain of *Lapageria*, both red and white varieties, which were in fine bloom in the early spring days. It flowers early in winter and is a picture at Christmas-time. One can imagine what a delightful plant it is to have at such a season in perfect health, as it certainly was here, growing in peat borders in the shade of the house and with no enemy but the slugs, which have to be diligently watched. This plant is from a

does not in the least give the fine picture to be seen as one stands underneath the Ferns in the quarry. I need not say what a fine feature of the garden these Tree Ferns are, not merely put out in the summer as they have to be in other districts, but left out throughout the year, and in the finest state of health in which I have ever seen Tree Ferns. The New Zealand Flax is massed in bold groups, and the Woodwardia, another Fern of fine form, is quite free out of doors. The happy owner—a good gardener him-

ing box of rubbish, right or left, as the case may be, more easily than the larger mowing machines are cleared. Since perfecting this invention, Mr. Challis finds it possible to sweep eight acres of lawn in one day with a 4 feet wide machine drawn by a pony, while a 5-feet machine, such as I saw at work at Wilton, sweeps twelve to fifteen acres in one day, saving the work of twelve or more men. The apparatus is fitted to quite small as well as the large-sized sweeping machines, and from what came under my notice recently it does its work remarkably well. I did not see a machine at work on a coach drive or walk, but Mr. Challis assured me that it could be used for all such purposes. I ought, perhaps, to add that the invention is patented, and machines have already been sold and distributed in considerable numbers. W. I.

ORCHARD AND FRUIT GARDEN.

STRAWBERRIES.

MR. ENGLEHEART contributes a most interesting note for Strawberry growers and raisers on p. 173. I could not help being struck with the pertinent and very truthful points which he raises in connection with flavour, constitution and variable aspects of culture. British Queen is no doubt a fine variety from a flavour point of view, but very few private or market growers seem able to make it a profitable one to plant. Those who possess the soil suited to its delicate constitution obtain a great deal of credit from consumers who are privileged to enjoy the fruit. British Queen and Countess I have planted repeatedly in small numbers with the hope of finding a spot suited to them, but the latter has been discarded, and the other raised but a languishing hope of success. Empress of India or Lady Suffield I have not tried. Gunton Park, which of the trio I supposed to be the strongest in constitution, has not yet given a satisfactory account of itself, and this experience makes one hesitate planting further doubtful ones.

The great influence soil has on Strawberries is very marked and disappointing when others meet with signal failures from no fault of cultivation, and the grower is often driven to adopt sorts suitable to his land entirely in deference to his own wish and desire. Latest of All, one of Messrs. Laxton's earlier introductions, has a good deal of British Queen blood in it, and for this reason it succeeds in but few places compared with such as President, Sir J. Paxton, or Royal Sovereign. In this garden there is no other variety that can compare with Latest of All for weight of crop or early bearing. Royal Sovereign, usually looked upon as a precocious fruiter, is very inferior. The plants grow strongly, but the flower-trusses are sparingly produced, and are very loose in habit. It is better as a two-year-old, but then not equal to others named. As a forcing variety there is no other to excel or even to equal it, all points considered. Leader comes near it, but as yet it has not been sufficiently proved, but an extended planting will decide its merits both as a yearling and older outdoor plants. The berries are firmer-fleshed and thus should travel well; its colour is brighter, though scarcely so dark, and the growth of the plant more moderate in strong ground than is Royal Sovereign. Its fruit is of large size, and the flavour, so far as I have been able to judge, is slightly above that of Royal Sovereign. The great faults of Latest of All are its pale colour, especially at the points, and the short time it keeps in hot weather when allowed to ripen well to the tip. It may be a better Strawberry for home use than market. In the former case the

fruit is more often gathered fresh for every meal; in the case of the market grower it is different. Mr. Engleheart is quite correct in saying that allowance must be made for different tastes. President from a flavour point of view is an excellent variety, but in bulk it is not so bright and taking to the purchaser as Sir Joseph Paxton or Royal Sovereign, and colour counts for much to fruit buyers. Certainly President is superior to many in flavour, but, like others, it is much influenced in its growth and size of berry by the nature of the soil in which it is grown. With me both President and Vicomtesse are under-sized and very similar in appearance; excellent they are as preserving sorts, but do not fill the basket like Leader, Sovereign, and Latest of All. Generally speaking, size takes precedence over quality if the latter is presented in small berries—at least this is my experience, gathered from remarks made by those with whom I have been brought into contact. I had almost resolved to plant some of the perpetual-fruiter varieties, but Mr. Engleheart's opinion of them settles what was to me an undecided point. I have never found small Strawberries much in request except for preserving, and presume that in the alpine sorts the fact of their fruiting outside the Strawberry season is their greatest recommendation. There must be disappointment or encouragement in the fact that the ideal Strawberry has yet to be raised. It is no doubt true that good qualities are distributed over several popular kinds, but the best not yet united in one. Growers would be glad if it were so; raisers probably are encouraged in knowing that it is not. It would seem almost difficult to learn in what direction to turn to find such an ideal, and there are no doubt some already weary of the effort to find it. There is one thing quite certain in Strawberry raising and growing, and that is the absence of any single variety that can be said to suit every garden or field in the matter of soil, situation, and climate. This is true both of their culture in the open and in pots. In the latter case it might be done by the importation of soil and suitable structures for forcing. Royal Sovereign comes nearer the ideal than any other Strawberry I know. W. S.

Apple Armorer (Ross).—I planted a tree of this comparatively new variety two seasons ago, and it has borne a few fruits this year. These are small in size, flattish and regularly formed, and covered all over with brown russet. On tasting the ripest of the fruits I found it to be very short-eating, juicy, and with a very rich agreeable flavour. No doubt after being kept for a time the flavour would improve, as it is, I believe, a late-keeping dessert sort. It appears to me to be a desirable Apple to grow for private use, the prettily shaped fruits being just the right size for table use, and being a late kind, it should prove valuable for the dessert after Ribston and Cox's Orange Pippins have been used. The tree seems to be a rather slender grower, partaking a great deal of the character of some of the Nonpareils in this respect, but it may perhaps grow stronger another season.—A. W.

Apple Wormsley Grange Pippin.—At first sight many would pronounce this Apple to be identical with Wellington, there being a great similarity both in shape and colour. However, on closely examining a specimen the illusion is at once dispelled, for it can then be seen that the stalk basin and the eye of the fruit are distinct, while a very pleasant aroma is given off which is absent in Wellington. If necessary, a more conclusive test is obtained by cutting and tasting a ripe fruit, when it will be found to be particularly crisp and short-eating and possessing a sweet, brisk flavour. The fruits are straw-coloured with the exception of the part exposed to the

sun, which becomes suffused with a pink flush. It is a good cooking Apple, but many are very partial to it for eating. It is a seedling raised by Mr. Thomas Andrew Knight, and is not, I think, much grown, as I have but seldom met with it out of the county of Hereford.—S. E. P.

Apple Schoolmaster.—There are some varieties of Apples which for some reason or other never seem to find favour with growers, and the one named may be included among the number. Why this should be I cannot understand, as it is neither tender nor a shy bearer. On the contrary, the tree is quite hardy, and as regards fertility, very young trees carry excellent crops of fruit. It is a first-rate cooking Apple for amateurs to grow, as when worked on the Paradise stock, bush trees can be kept in quite a small state without having recourse to lifting, the free-bearing qualities of the variety alone serving to keep them from making strong growth. It also makes a good standard on the free stock and is very suitable for orchard culture. The fruits are from medium-sized to large, conical and straw coloured, with a few grey dots widely dispersed over the surface of the skin. Where the fruits are fully exposed they become prettily coloured, standard trees generally furnishing the best examples in this respect. It has a white flesh, is juicy and acid, cooks well, and its season is from November to the end of the year. I have before now kept it in excellent condition some time after the time specified. This variety was introduced to public notice by the late Mr. Laxton, but is supposed to have been raised in Herefordshire early in the present century. It was certificated by the Royal Horticultural Society in 1880.—A. W.

DECORATING EXHIBITION GRAPES.

For some time past a growing desire has become apparent for a decided change in the method of staging Grapes at shows. The long, straight, formal rows of boxes or stands with the bunches arranged upon them symmetrically have at last, most fortunately, had their day, and now the era of a change has set in, as exemplified at the great show recently held in Shrewsbury. Several persons holding a high position in horticulture have strongly deprecated any change in the formal system so long in vogue by the votaries of order and primness. Visitors to the show in question had a magnificent opportunity of seeing what can be done in the way of decorating even show Grapes. As is well known, good prizes were offered for twelve bunches of Grapes in six varieties. Each bunch was to be staged on single boards of the orthodox pattern. Instead of all the bunches being arranged in one formal row, as is usually the way, they were arranged in two tiers, one above another: the extreme space to occupy was not to be more than 8 feet by 4 feet 6 inches. Non-flowering plants, in or out of pots, and loose foliage were allowed. A maximum number of six points was to be given for decorative staging, and as the Grapes themselves were to be judged by a system of points, effective decoration was of some importance. In both the first and second-prize stands five points were allowed for decoration. Probably the second-prize collection would have carried more if the exhibitor had not coated the Vine leaves over with some glutinous substance with the idea of preserving them longer in a fresh condition. In the first-prize exhibit from Mr. Lunt small Pitcher plants raised on neat pedestals were effectively employed. As a background small and graceful plants of *Cocos Weddelliana* were used along with small Ferns mounted on a base of green Moss. In the second-prize exhibit Palms and Crotons were pleasingly arranged among the Grape stands, the front portion being draped with trails of *Smilax*. The decoration of the six competing stands displayed much diversity of taste, as was to be expected, and afforded object-lessons of a valuable character.

The most effective plants to employ are well-grown narrow-leaved yellow Crotons of a drooping character, *Cocos Weddelliana* and small plants

of *Kentia Belmoreana*, with stocky plants of such Ferns as *Pteris serrulata* and its varieties. Trails of Vine laterals and *Smilax* on the top of the stands as well as on the cloth between the stands add materially to the effect. Red Crotons, dark-leaved *Dracenas*, and white *Caladiums* of the argyrites type are the least effective. The *Caladiums* contrast badly with the white paper on which the Grapes are placed, and the coloured plants alluded to with the black Grapes. In several instances trails of Ivy were employed. This addition had a somewhat stiff and heavy appearance, and so had the Crotons with broad and stiff leaves.

There is no reason whatever why this method of staging Grapes should not be generally

In this I quite agree with him, as the trees create a very beautiful effect when in bloom in the spring, and in autumn when laden with fruit they are equally effective. It is also a good cooking Apple, and some people like it to eat, the flesh being soft and sweet. Starlings are particularly fond of this Apple. Great numbers of trees of Emperor Alexander are grown in this neighbourhood, the local name for it being Stoke Tulip, in allusion, I presume, to the colour of the fruits somewhat resembling some of the bright-coloured border Tulips when in flower. It is an excellent cropper. The fruit, which grows to a very large size, colours grandly, and in the local market realises good prices, the fruit being too soft to

held over a rather large reserve of Red Currants, these Raspberries have come in most useful, as there has been sufficient of them both for cooking as well as for dessert. Red Currant and Raspberry tarts are always welcome in the summer, but when they can be had in the autumn they are doubly welcome, and are then looked upon in the light of a great luxury. It is surprising that these autumn-fruiting Raspberries are not grown more generally than they are, for their culture is very simple, the chief thing being to feed well and to thin out the canes early in summer. A wire trellis is, perhaps, the best to tie the canes to, and if the canes are kept from 9 inches to 1 foot apart, each one then has plenty of room for development. October Red is the sweetest flavoured, and therefore the best kind for dessert, while Belle de Fontenay, which bears fruits almost as large as those of the summer-fruiting Superlative, is more acid, and therefore more suited for cooking. Unless very severe frosts should come, the supply will last for another week or two.—S. P. H.

YOUNG AND OLD PEACH AND NECTARINE TREES.

AN interesting article on the above recently appeared. A correspondent advised intending planters of Peach trees to select them, if possible, while growing in the nursery and have their names attached. This is good advice, as so many disappointments occur through planting inferior trees. To plant gummy trees is to court failure, though sometimes with care they will grow out of that condition if planted in a not too deep and comparatively poor border. Very many trees at the present day after a few years' growth swell out unduly at the point of union with the stock, the natural flow of sap being thereby hindered and the tree finally collapses, often quite suddenly. This condition is, in my opinion, caused by the use of unsuitable stocks, which is not fair to purchasers. Those who have sufficient wall space do well to bring on a few young trees for removal under glass when blanks in Peach houses occur. As a rule, gardeners do not look for fruit the first season after planting—at least, when the trees are bought in—the rough-and-ready treatment they receive at lifting-time, and the subsequent journey by rail being anything but favourable to the retention of the bloom-buds—if such there be—in a plump condition, and the same may be said of the fibrous roots. Moreover, thickly-grown nursery trees are not always sufficiently ripened, and so shrivelling of the wood often occurs. If healthy young trees well furnished with bloom-buds are growing in the home garden, and care is taken to prepare the right sort of border beforehand, and to lift systematically, there is not the slightest reason why fruit in quantity should not be forthcoming the next summer. I have even known such trees planted in early autumn in an early forced house to bear a few very nice fruit. I think many err in making too much border to start with; indeed, the more I look at the subject the stronger is my conviction that grand crops of the very finest Peaches may be grown in borders of very limited size. Well-drained borders, say 2½ feet deep, consisting of good holding yellow loam and old plaster or mortar rubble, without any further addition, will grow the finest Peaches. The compost, well mixed previously, should be thrown together piecemeal and made as firm as possible. This firmness is indispensable for the formation of fibrous roots, as in loose borders, especially when of a rich nature, the roots formed are of a shoelace character, and do not permeate it before the soil becomes sour. Much depends upon moving Peach trees at the right moment. When the foliage is taking on a yellow tinge is the time to lift, and the soil about the roots should be in a thoroughly moist condition. Some attach little or no importance to securing a ball, but I certainly would do so where practicable, as favouring a more speedy and satisfactory root action. Plant shallow, from 4 inches to 6 inches from the surface, water



Jasmine-flowered Solanum. (See p. 393.)

adopted even in the two and single bunch classes. Anything that will serve to break up the long formal rows so long adopted by societies in all parts of the country will be a step in the right direction, and will not detract from the appearance of the Grapes themselves, but will tend to render them all the more interesting to the general public.
E. MOLYNEUX.

Apple Emperor Alexander.—A note on this Apple appeared in a recent issue of THE GARDEN, in which the writer speaks of it as being a good variety to plant for effect in the pleasure grounds.

send any great distance. It is best grown as a standard; bushes, unless they can be allowed a great deal of latitude in the way of growth, seldom bear more than half a crop, and sometimes not that.—S. E. P.

Autumn-fruiting Raspberries.—A great many people when looking round these gardens lately have been surprised to see the autumn-fruiting Raspberries carrying such heavy crops of fruit. I cannot call to mind a season in which they fruited more freely than they have done this, the tips of the canes having been literally loaded with large and well-coloured berries. Having

home, and apply a mulch of old Mushroom manure or similar material. If the weather is close and sunny, syringe the trees once a day till the foliage falls and keep the house fully aired and moist. If the roots of such trees are examined in a month's time a colony of young fibrous rootlets will be found and the wood and buds will remain as plump as if the tree had not been moved. We sometimes see it asserted that young trees are necessary for the production of fine crops of large Peaches, but my experience is that old trees, that is to say, those from ten to fifteen years old, produce the finest fruit, all other conditions being equal. The finest fruits of Royal George I ever saw were on a tree which I suppose would be quite twenty years old. If due preparation is made, large trees, if in good health, will stand removal with impunity and fruit freely the following season. I have often heard gardeners say, and I have proved it myself, that when old Peach and Nectarine borders of great width and depth are cleared out, comparatively few roots of a fibrous character are found, the soil in most instances being sour and unenticing. H.

Apple Washington.—The hot weather of the summer now past has just suited this American Apple. I grow it as a bush in a warm position, and it invariably yields a good crop of fruit. This season has proved no exception to the rule as regards crop, but the tree has surpassed itself by producing large highly-coloured fruit of splendid quality. It is a soft-fleshed Apple, and therefore much appreciated by those who cannot eat those of firmer texture. It is also juicy, very richly flavoured, and at its best during November. If kept long after that period its flavour then deteriorates.—HEREFORD.

Two good late Peaches.—Both Prince and Princess of Wales Peaches have been a great success this season, the latter being more highly flavoured than usual. Prince of Wales is always the better flavoured of the two. The fruits of Princess of Wales were, however, much the larger and were very handsome when fully ripe with their yellow skins striped with red. Prince of Wales was quite as dark in colour as Bellegarde and very juicy and richly flavoured. Where the Peach will succeed as an outdoor fruit a place should always be found for these two kinds. I have Prince of Wales on a wall facing north-west, and Princess of Wales in a position exactly due west.—A. W.

Apple Golden Reinette.—Two specimens of this Apple were handed to me for identification the other day. Those were exceedingly well grown, and possessed all the characteristics as regards shape, colour, and flavour of this fine old variety. I was informed that these had been gathered from a standard tree, the yield being a heavy one. This Apple used to be grown extensively in our orchards in years gone by. Grown as a standard, the yield from a single tree often runs into several hundredweight, and this is the best way of cultivating it for market. It also succeeds well either in the form of a bush or espalier. The fruits keep well in a cool store and may be had in good condition until March with the flavour unimpaired.—HEREFORD.

Apple Mabbott's Pearmain.—For many years a standard tree of the above has been growing in a grass paddock here. How long it has been in its present position, and where the tenant who then rented the paddock and planted the tree procured it from I am unable to say. I have known it for the past thirty years, and previous to learning its name I looked upon it as being a local seedling. Some seventeen years ago the late Dr. Bull applied to me for a specimen fruit of this variety, together with any information I could afford as to its history, &c. I replied that I had not got it and that it was quite unknown to me, little dreaming that I had a full grown tree of it well laden with fruit in my charge. I was unable to get it named until a few years after this occurred, but have always set great store on it as a dessert Apple for mid-winter

use. In some seasons it comes almost as large as the old Pearmain, and keeps quite as long. I saw one or two good dishes of typical fruit at the recent Crystal Palace show, the grey freckles on the skin—which are so characteristic of the variety—being very prominent. It is a handsome and highly flavoured sort; the tree is hardy and well adapted for orchard culture.—A. W.

Late Strawberries on north borders.—In the issue of THE GARDEN for September 30 there appeared an excellent article from "Norwich," the perusal of which afforded me much interest. I quite agree with all that "Norwich" has to say with regard to cultural details, and the remark he makes with regard to the variety named Loxford Hall having to be well grown he might, I think, have extended to nearly all the late varieties. According to my experience, late Strawberries require a rich soil, and I therefore always have plenty of manure dug in prior to planting, the quantity being considerably in excess of that afforded for the early and midseason sorts. I generally grow them on borders under walls which are covered with Morello Cherry trees, and having two such borders, the one being of great length and quite three times as long as the other, I arrange the cropping so that a portion at any rate has a whole season's rest from Strawberry growing. Here they succeed remarkably well and bear crops of very fine fruit, the supply lasting over a long period. With regard to varieties, I have tried several of those named by "Norwich," but have given up all in favour of Oxonian, which is quite at home in this locality. This I treat as a biennial, as the berries being required simply for dessert, the fruit the third season, though plentiful enough, lacks size, and is not considered sufficiently large enough for our requirements here. Treated in this way fine fruit can be secured both the first as well as in the second season if the precaution be taken to layer the early runners. To secure plenty of these latter, a few plants should be grown in the open expressly for the purpose, as runners taken from plants on north borders are, as a rule, too late to be of any service the first season, i.e., from a cropping point of view.—S. E. P.

TREATMENT OF AMERICAN BLIGHT.

M. LOCHOT, formerly head gardener to the municipality of Dijon, and at the present time filling the same office to the Prince of Bulgaria, has described in a recent number of *Pomologie Française* his method of treatment, which he considers to be more effective than any that has been tried hitherto. He says:—

I resolved to carry out the treatment after the fall of the leaves—that is to say, during the month of November. At this season there is nothing to fear from further laying and the insects will have reached their maximum of increase; they await the first of the cold weather before hiding themselves under the old bark, or more generally the roots nearest to the tree-stem. During the winter and spring the treatment is less effectual, as one is unable to get at all the insects that are on the roots. Take a fire-proof vessel of 4 to 5 gallons capacity, put in it 1 lb. of black soap and 1½ quarts water and place it on the fire until the soap is entirely dissolved in the water, when remove and allow the liquid to cool, keeping it carefully under observation meanwhile. Have at hand a quart of raw petroleum and a wooden spoon. When the solution of soap and water has sufficiently cooled and become semi-liquid, stir it quickly with the spoon in one hand and with the other gently pour in the petroleum. If this is properly performed the mixture will be absolutely homogenous, and will have the appearance of a brown creamy liquid. At this stage pour in 2 quarts of water, stirring constantly the while, and then leave it to become quite cold. All that is necessary now is to add the quantity of water needed, say eight quarts, to obtain twelve quarts of liquid, and in addition about half a pint of colour-

less tobacco juice strong in nicotine. The mixture will keep indefinitely; it is semi-liquid and milky in colour. The essential thing is to add the petroleum to the dissolved soap at the right moment. If the soap and water are too hot, the petroleum remains on the surface and there is no proper mixture. If too cool, the soap will be lumpy and the result no better. The right moment can be ascertained with a little practice. I have always found it best to add the nicotine last of all. The use of ordinary tobacco juice is not to be recommended for this purpose. When the trees are attacked, no attempt should be made to carry out the treatment during growth. The leaves are an obstacle to the operator, retarding his work and compelling him to miss many of the insects, and so the whole thing has to be done again in the autumn. It is much better to apply the treatment in November in the following way: Remove any leaves that remain on the tree, and then cut away all the parts that are past recovery. Young trees of the year one is often obliged to cut down entirely, the eyes at the base being altogether lost. The leaves and wood that are cut away should be collected and burned. Then for the space of 20 inches all round the stem remove the soil as far as the collar of the first roots. Take a paint-brush of medium size, half used, so that the bristles shall be stiff and well able to penetrate the small cracks in the wood, especially the wounds made by the insects. All that remains now is to paint the tree all over, not forgetting the stem and the root collar. Replace with a little new earth the soil that was removed and the operation is complete. It is quicker to set two men to work, one to prune and clean the tree, the other to apply the insecticide. Avoid changing the man who wields the brush, as in a little time he will have become very dextrous at it and the work will be done much better.

On the above remarks of M. Lochot, M. Dauthenay in the *Revue Horticole* makes the following observation: "I have been able to prove the excellence of these recommendations, having been guided by my own experience to proceed exactly in the same fashion. But if the method laid down by my colleague is not altogether a novel one, it has at least the indisputable merit of being practical."

Nectarine Spenser.—Never has this late Nectarine been so good as it has during the past season. The fruits not only grew to a large size, but they put on a splendid colour almost as dark as mahogany, and the flavour was delicious. I have but one tree, which covers a good area of wall, and this carried a crop equal to one fruit for every square foot of space covered by the tree. The latter is very hardy, vigorous, and fruitful, and I consider that next to Humboldt it is the best late Nectarine we have. A gentleman interested in Peach and Nectarine growing, when looking round just as the fruits were beginning to ripen, was impressed with the handsome appearance of this variety, and intends adding it to his collection this autumn. My advice to those who do not grow it is to do so, for wherever the Peach will succeed outdoors this Nectarine will also flourish and bear abundantly.—A. W.

Cutting back Raspberries.—Many hesitate to cut back their Raspberry canes when newly planted, especially when they are purchased from the nursery, more particularly when they happen to be strong. Nurserymen foster this failing by sending strong rods carefully preserved their full length. Inexperienced growers are those of course more likely to fall into such error. So planted it commonly happens that the energies of the plant are used up in its effort to fruit, leaving the sucker growth, which is the all-important part, to chance, with the result that the cane often dies at the end of the fruiting season. Severe shortening is almost as great an evil as the other extreme. I saw canes quite recently that had been cut back to less than a foot from the soil, and the results were very plainly to be seen in the broken lines of summer shoots. This comes from pruning too soon or at the time of planting. Had they been

slightly shortened then, and when growth was active in spring still further pruned, the sucker growth would have been more surely established. This would seem to have been uppermost in "A. D.'s" mind when penning his note on p. 272. The weather at the present time is most favourable for transplanting the canes from home-grown beds, though full early for getting them from distant nurseries, at any rate in a season when growth is so late as the present one. Rain, however, is badly needed for moistening the soil for all newly-planted trees.—W. S.

Exhibiting Grapes.—There is little to find fault with in the present method of exhibiting ordinary fruits at shows, whether in collections or otherwise, with the exception of Grapes, and these do badly need improving in appearance, as long rows of bunches on boards are far from pleasing. But when the Shrewsbury Executive do make an effort—and a remarkably successful one, too—in the direction of making one Grape class there attractive and pleasing, it is a little disheartening to hear of such an objection as is made by "H."—that the dress accessories practically caused the Grapes to play second fiddle. I am absolutely certain that whilst every on-looker was pleased with the accessories of plants, flowers, and foliage, not one but regarded the Grapes as the exhibit. It would be as wise to say that a dressed dinner-table is the dinner, and not the substantial foods placed upon it.—A. D.

PLANTING APPLE TREES.

THOSE who have a light, easily worked soil have a great advantage as planting time comes round compared with those growers whose soil is heavy and stubborn. No matter how far one looks forward and prepares, there are sure to be some places that have to be made ready almost at the last minute, and the trees suffer accordingly. This season I have had all holes ready for planting on the grass and all beds and borders made up the last two months, and the soil that was thrown out of the holes was mixed with as much good compost as could be spared. The lumps were broken down and the rains have softened the whole of it, so that the trees when they arrive can be planted as fast as a man can unpack them. I usually have a water-cart filled ready and thoroughly soak the roots after removing the outer packing material, then as they are unpacked all ragged ends of roots are cut clean and the trees planted. It is important that enough fine soil be at hand to cover all the roots, and the upper tiers of these are left about 2 inches beneath the surface. Quite recently I was asked what stock was the best to have Apples worked on so that they could be planted sufficiently deep that vegetables of different kinds might be planted over them. It has again and again been pointed out in THE GARDEN that unless fruit tree roots are kept up and allowed to take advantage of air and surface warmth, the produce of such trees is not at all likely to be worth anything.

When planting thus early in the season it is well to give the roots a thorough soaking of water as soon as they are just covered and before placing the top soil on. All ramming and treading should be done before watering and the dry soil placed as loosely as possible. Nothing is more troublesome in heavy soils than the cracking in hot weather that follows ramming or treading of the upper layer, and this is easily prevented, as described above, either mulching or lightly hoeing the surface in spring. Where rabbits and hares are troublesome the stems must be protected the same day as they are planted, for these are both very much more partial to newly-planted trees than to those that are well established. Standard trees are easily protected by tying on straw bottle-cases with wire. If done with string the animals soon nibble them off, but they never seem to begin on the straw, and if they do, a little tar and water smeared over it will stop them. They are far better than hay-bands. Bush and pyramid trees must be surrounded by wire netting, which must be turned

outwards at right angles an inch under ground. This will be found a much better way than letting it into a trench, as the rabbits always begin to burrow close by the wire and will go under it, but when they come on the netting they give up the attempt. Staking should also have immediate attention, or a sudden storm of wind and rain will ruin a lot of trees. Here hay-bands are useful, and well twisted and tied to firmly inserted stakes are the best means of keeping the trees steady. Tall and very erect-growing kinds like King of Pippins should not be planted in the most exposed places, but any kinds such as Beauty of Bath that are more spreading in habit and have the fruit removed early may be, as these are gathered before the autumn gales. H.

WINTER GRAPES.

MOST people like to get as much variety as possible into their fruit whether outside or in, and though the aim is a good one in many respects, it is not without its drawbacks by any means. Respecting Grapes, for instance, a good deal of misconception as to the best varieties exists, and in speaking now more particularly of winter varieties it is a little remarkable that so much valuable space is given up to such second-rate kinds as Black Alicante and others. This Grape is an excellent keeper without a doubt, but this fact does not account for its culture in houses where good Lady Downe's, Gros Colman or even in some cases Black Hamburg and Madresfield Court might be kept. A rod or two of Alicante for the latest supplies should be ample, and in place of it more of the two first-named ought to be grown. Take Gros Colman, for instance; much of the disfavour in which this is held may be traced either to over-cropping or insufficient time. Time it must have to bring out its proper flavour, and if not over-cropped there should be no difficulty in getting the colour laid on. In common with one or two others, Gros Colman is very liable to be attacked by red spider, and naturally this has a bad effect. No Vine, unless thoroughly healthy, can be expected to finish its fruit properly, and red spider is very prejudicial to health. The attack often follows sun-scorching, or, indeed, anything that lessens the vitality of the foliage, so one precaution will be careful ventilation on bright mornings so long as the foliage is tender. Lady Downe's finishes much quicker than Gros Colman, and yet has the merit of hanging well on the Vine or keeping in the Grape room. Its handsome appearance, too, is all in its favour, and it is one of the best and most attractive kinds in cultivation. The skin, though fairly thick, is not tough and leathery like that of Alicante, and its freedom of setting gives it a very decided advantage over the capricious Alnwick Seedling. Gros Maroc is a handsome kind that keeps fairly well, but, taking into consideration the room it needs and the lack of flavour after it has been hanging a little while, it is not nearly so good as the two former. Mrs. Pince is an excellent kind where it does well, but in some places this often fails to colour properly, and though of the richest flavour when well finished, is no better than the last named. The new Grape Diamond Jubilee exhibited at the Palace and elsewhere this season looks a promising kind, but whether it will bear out the encomiums passed upon it this season when brought to the test of culture of course remains to be seen. H. R.

Pear Flemish Beauty.—This seldom-seen Pear was referred to a few years ago by a writer to THE GARDEN, and I think it was Mr. Temple, of Carron House, Falkirk, who replied to the note, speaking in favourable terms of it. It is

not, perhaps, what one would term a butterfly fruit, but when well ripened on wall or espalier it is very pleasant eating and extremely handsome. It belongs to the rounder-shaped section and makes a very handsome dish. It needs somewhat careful culture, as the tree is apt to grow grossly in strong, rich soils—at least, when on the Pear. I have never grown it on the Quince, but judicious root-pruning will eventually remedy unfruitfulness. It quite deserves to be included in every collection.—NORFOLK.

Strawberry Latest of All.—I have written of Latest of All just as I know it; that is enough for me. I have written of it also as I have seen it in the south on strong soil. If it has behaved differently in the neighbourhood of Sheffield that may be due to both climate and surroundings. So far as I have seen Laxton's varieties, if Royal Sovereign be the best, certainly I regard Latest of All as the next best from that raiser. I know Elton Pine also, and knew it well half a century since. It was in its day a good late variety, but certainly it is far from being satisfactory everywhere. Like Latest of All, it seems to do best on stiff soil. I grew it for many years at Bedford, where it always gave good crops, but whilst the first fruits ran of good size, the later ones were only useful for preserving. Latest of All has fine fruits throughout, crops more heavily, and has better flavour. Certainly in the south, where the fruits become well finished, they are of excellent flavour. I have said nothing as to the parentage of Latest of All, and it is a matter of absolute indifference as to what that parentage may be. We need only concern ourselves as to the merits of the variety.—A. D.

FIGS CASTING THEIR FRUIT.

I HAVE some young Fig trees which show fruits towards the end of summer. These fruits fall off in spring. Do Fig trees show fruit one year and ripen them the next, or should they show fruit in spring and ripen them the same year? Mine have fruit on now about the size of Filberts. The trees are on a north wall, and were raised from cuttings taken from a good bearing tree.—A READER, Ireland.

* * It is quite natural for Fig trees planted outdoors to cast the fruits which attain the size in the previous autumn of those that "A Reader" inquires about. Those which should stand and ripen will now be so small as to be not readily discerned, and, given the proper position and treatment, there should be enough of these to provide a nice crop; indeed, it is only these formed on the previous year's wood that are of any value for outdoor fruiting. The second crop, i.e., Figs which form on the wood made during the current season, are too late to be of any use except, perhaps, in the longest of summers and the best possible situations. "A Reader" has chosen the worst of situations for his trees, viz., a north wall, and he must never expect a crop of Figs from trees so placed, for the Fig tree requires all the sunlight that can be given it in order to ripen up its wood. Warmth at the roots, too, is necessary during summer—that is to say, the soil must feel the influence of the sun, a thing impossible in such a position. If "A Reader" wishes to succeed, he will lift his trees and plant them against a south wall in a border composed of soil that is not over-rich and with which have been incorporated broken bricks and mortar rubbish in liberal quantities, forming at least one-third of the bulk with the latter ingredients. This border can hardly be made too solid, as a hard root-run tends to prevent gross wood and causes the wood which is made to ripen up early. Favourite and good positions for Fig trees are elevated situations in cobble-paved yards or a narrow raised border by the side of a hard gravel walk. The above will indicate the lines to be worked on to command success. "A Reader" does not say in which part of Ireland these trees are growing. If in the south or south-west there will be no need for protecting the wood in winter, but in colder districts it

would be necessary to tie the branches in bunches, bringing them low down towards the ground and covering them with dry Bracken or some other such material, which may be lightly bound round the bunches of branches or held in position with mats. This should be left on till late in spring, as the embryo fruits are very susceptible to frost, and the wood also gets killed back in severe winters if unprotected.—J. C. T.

LATE DESSERT APPLES.

In this district (Sussex) the late dessert varieties of Apples are more plentiful than the early kinds. May be this is owing to the trees not flowering so soon or the bad weather which we experienced in May.

Golden Nonpareil was one of these, and though not one of the best of our dessert Apples it is still useful as a variety, as if left till late on the tree it keeps well into the spring. The fruit though small is well shaped and makes a pretty dish.

Golden Harvey.—How seldom is this pretty little highly flavoured dessert Apple seen on the exhibition table. Can it be because it is not

being a clear yellow when fully ripe. There is so much difference between the fruit grown on a north wall and that which is fully exposed, that unless one was well acquainted with them he would not take them for the same variety. When allowed to hang long on the tree the fruit will keep sound until March. This is one of the most useful varieties we have for stewing whole, and is a great favourite with cooks for that purpose.

Duke of Devonshire.—This is another of those late varieties that finds little favour with exhibitors, though it is as handsome in shape when well grown as Golden Noble. The tree is hardy and an excellent bearer. This season, though with me the Apple crop is anything but a good one, there has been a fair sprinkling. When fully ripe the fruit is of a beautiful lemon colour strewn over with russet, and often on the side next the sun in exposed places it has a dull red cheek. The flesh, which is crisp and sweet, is of a yellowish colour. If allowed to hang till November on the tree the fruit will keep plump till March or April.

Sturmer Pippin.—In this we have one of our most valuable dessert Apples for spring use, and, unlike any of those previously named, it is a

wall under my charge. It was healthy and did not form gross wood, yet it would not fruit. I waited for six or seven years, as a gentleman who visited my employer stated that in his district—the west of England, I think—it fruited and was of delicious flavour. In all the reports of the fruit crops which have appeared in THE GARDEN I do not remember having once seen Aston Town named. I should be interested to learn if any reader of THE GARDEN has a tree which bears fruit, and if so, what his opinion of it is. I have only seen it named in one or two fruit catalogues.—B. S. N.

GARDEN FLORA.

PLATE 1249.

ROSA HISPIDA (R. LUTESCENS).

(WITH A COLOURED PLATE.*)

THE Roses that constitute the spinosissima (or pimpinellifolia) group are not only very charming in the beauty of their flowers, but they are also particularly welcome because they herald in the great Rose season. The plant now figured is one of this group, and it is one of the



Hydrangeas in a wood in Cornwall. (See p. 393.)

sufficiently known, or is it on account of judges giving a preference to something with colour in it? It certainly cannot be from lack of flavour, as there are few, if any, more highly flavoured Apples to be found growing in our orchards. The tree is hardy on most soils, though with me it is apt to canker. It is a most prolific bearer, and keeps in fine condition for a long time if allowed to hang on the tree till November and when gathered placed in a cool place.

Golden Russet.—With me this tree has rather a loose habit, but otherwise it is well suited to the soil and the fruit grows to a fair size. It is a good cropper, being hardy and less liable to canker than some others. Like all others of its class, the fruit should be allowed to hang as long as possible, then be stored in a cool place. When ripe this makes a very pretty dish, especially when grown in an exposed place, for then the fruit on the sunny side has a tinge of red covered with russet spots.

Court of Wick.—With me this variety seldom fails to produce a crop. An old tree growing against a north wall is usually loaded with fruit, and though the Apples are not so large as those grown on bushes in exposed places on the Paradise stock, the fruit is of a better colour,

showy variety. I have it growing on a north wall, where the fruit is of a green colour, changing as it ripens to a yellowish green, but in the open where fully exposed to the sun the fruit is of a bright red on the sunny side, and this season it is brighter than usual. Seldom a season passes but what there is a crop on the wall, though sometimes trees in the open suffer from the late spring frosts and wet weather. The fruit ought never to be gathered until the leaves begin to fall, when if stored in a cool place it will keep sound till the following May.

There is quite as much art in preserving Apples in a sound condition as there is in growing them, but unless suitable places are provided it will be impossible to do this, no matter what care is taken. We too often see them stored in dry, airy lofts where fire-heat is provided instead of in cool, damp places, from which frost can be excluded without the aid of artificial heat.

H. C. P.

Pear Aston Town.—How seldom do we see this Pear mentioned—the reason, I expect, being that it is only in a few soils and localities that it succeeds. I once had a trained tree on a west

earliest to flower. I have seen it in bloom in the open air during the last week of May. It is a Rose about whose origin there has always been a good deal of doubt. It is known to have been cultivated in a garden at Islington as far back as the year 1781, but no record exists of when or from whence it was introduced. Loudon and others alluded to it as the “Yellow American Rose,” and Pursh—a German botanist who published a “Flora of North America”—described it as *R. lutescens* and included it in that work. The later American writers, however, unanimously discard it. It was then generally looked upon as a native of Siberia, but as no authenticated wild specimens are contained in the public herbaria, this remains nothing more than a surmise—at the same time probably a correct one, judging from the fact that its nearest allies are found in that country. The theory that it was a hybrid of garden origin was disposed of when plants were raised from seed, for these have invariably come

* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



ROSE - ALBA

quite true. Mr. J. G. Baker, our leading authority on wild Roses, now regards it as nothing more than a variety (probably Siberian) of the Scotch Rose, so that its proper name will be *R. spinosissima* var. *hispida*. Certainly it does not differ in any essential respect from the common Scotch Rose more than the variety of *R. spinosissima* known as *altaica* (or *R. grandiflora*) does.

The plants from whose flowers Mr. Moon made the accompanying plate are 5 feet to 6 feet high. Thus they are giants compared with the ordinary Scotch Rose. The stems are sturdy and quite erect, and thickly set with slender bristles. The leaf consists of seven to eleven leaflets, which are of a rich green and considerably larger than those of the Scotch Rose. Of the flowers, which are single and about 2½ inches across, Mr. Moon's drawing will give

interest that is being taken in the wild types of *Rosa*, this plate of *R. hispida* will be welcome. It is a plant which ought not to be overlooked.

Kew.

W. J. BEAN.

THE WEEK'S WORK.

OUTDOOR FRUITS.

PLANTING.—The weather up to the time of writing has been wonderfully open and mild; just what is required by those who have a considerable amount of planting to do, and all that is required in that way with home-grown stock is, or should be, now completed, but with bought-in stock the case is different, as one has to wait until the nurseryman is ready to send; and as the summer has been dry and there have been no frosts sufficiently severe to influence the fall of

together, syringing the branches freely, and then enveloping them for a day or two in thick Russian mats, which should be kept saturated while in use. It ought to be remembered that the roots of such trees, or, indeed, any others, should have very little exposure when the time comes for planting, and the good grower will have all the holes prepared, filled up to as nearly as possible the requisite height to receive the lowest roots, and also have in readiness any helpful ingredient that one may have at hand for encouraging the roots to commence making fibres straight away. With this part of planting I have already dealt, but I may add to my former remarks that I have found in orchard planting that a few shovelfuls of garden soil are useful when one has nothing better in the shape of mellow, crumbly loam to give the trees. Look over each tree before planting, and remove everything in the shape of fractured portions of roots to a point behind the fracture, even if this entails a considerable sacri-



Bamboos in a seashore Cornish garden. (See p. 393.)

a better idea than any words can. The colour is certainly, I consider, one of the most charming to be seen among these wild Roses; at first a delightful soft shade of yellow, it becomes paler and more creamy with age. As has already been intimated, this Rose can be increased by means of seed. Of this its black fruits enclose an abundance. Plants can be obtained more quickly, but in less quantity, by layering.

A group of some half a dozen plants in the sunk Rose garden at Kew always makes a lovely picture in the early days of June. To see it at its best, not less than that number of plants should be grouped together. Of course, it only blooms once a year, but, after all, that is a characteristic common to most shrubs, and there is certainly no lack of flowers when it is in bloom. To those who share in the reviving

the leaf, the chances are that orders given will not have been dealt with so early as usual, and the most one can do is to be as nearly as possible prepared to deal with the trees when they come in. Nurserymen's ways are not those of the private garden, for they are obliged to anticipate orders and to lift large numbers within a short time. This is unavoidable, and the best is probably done under the circumstances, but the fact remains that trees often come to hand with their roots and branches somewhat shrivelled or in a drier state than they ought to be, and if they are planted right away the bark is a long time in plumping up again. The best thing to do with all those that are not too big for such treatment is to bury them for a day or two, root and branch, in damp soil; this acts like magic in the way of plumping them up, and they are then in a better state for planting. Trees too big to bury may, however, be helped by heeling them in thickly

fice of some of them. It is best to cut back to the point of junction with another root if possible.

PRUNING.—After having finished the trees on north walls go on to those on other aspects. The occupants of these are generally more mixed, and as the wood of the Pear tree is much more brittle after the turn of the year than it is before, I like to deal with these early enough to avoid this extra brittleness. There cannot be the least doubt that most of the old Pear trees throughout the country are carrying far too many fruiting spurs, and this will account for most of the poor, scabby fruits that one sees about. There is no sense in leaving so many, as, provided there are sufficient to carry a crop, the rest are superfluous for the time being, and the timely removal of a few spurs bodily here and there all over the trees not only gives those left plenty of room, but it forces new spurs to form round the point of severance that take the place of the older ones which

are removed in their turn in future years. Consequently the trees eventually have plenty of vigorous fruiting spurs close at home and none of the rugged, Moss-covered and unsightly ones, which can only produce mediocre fruits. In addition to the wholesale removal of spurs, some of those left on may be judiciously shortened with advantage. On wall trees the wood growths must be cut back to within a bud or two of their base unless they are required for extension. Young trees which have not yet filled their allotted space must be pruned with an eye to form. For those trained horizontally the leader must be left just the length to provide a pair of branches next year at the proper distance from those immediately below, and with one bud above to carry on the upward progress. No matter how carefully one may prune, some of the side branches will grow stronger than others, and those who attempt to cut these strong leads back close only encourage the evil, for they break again with extra vigour, and it is really the weakest that should be hardest pruned to encourage stronger breaks. The strong ones may be toned down by depressing the ends of such branches when training, and the weak encouraged by elevating them. The only time when shortening back tends to weaken shoots is while they are growing; we may then check them by pinching out their points soon after midsummer and supplementing this by vigorously stopping further breaks at the first leaf, ultimately at the winter pruning cutting back to the next bud behind that which broke into growth after the shoot was pinched. Fan-trained Pear trees are more easy to form, and though they are not often seen, they are equal in every way to those of the more orthodox form. It is necessary with these to keep the centres in check until the lower branches have become well extended, and it must not be forgotten with these or any other trees that the promptings of Nature are towards vertical growth; consequently the upright portions of a tree are always the strongest unless counteracted by the art of the cultivator.

PLUMS.—In pruning Plum trees one has to allow more license to spur-growth than is advised above for Pears, as their nature is to be more straggling, so that it is impossible to keep them close to the wall and get good crops at the same time, but it is often possible to shorten a few spurs slightly, and this should be done whenever there appears to be a good show of flower-buds. Old Plum trees are rather subject to branch-dying, and where any branches show signs of this it is advisable to lay in new shoots to replace the old whenever the collapse comes. This, of course, has to be provided for during the growing season by allowing a few of the best placed shoots to run on without stopping them when summer pruning. I allude to these now to caution young growers against over-shortening such shoots, as hard pruning will never assist in building up fruitful wood. If laid in to full length, or only slightly shortened, a year or two is sufficient to bring them into a condition in which they will be bristling with fruiting spurs in place of the gross and fruitless shoots produced by hard pruning. The only excuse for shortening such shoots is to remove unripened wood, if any, and well-ripened shoots may be laid in intact. Breast-wood must of course be cut hard back to the spurs, and other useless shoots that may have developed must be cut clean away.

FIGS.—To make certain of a crop of outdoor Figs, protection of the wood is necessary, and to this end the branches should now be unfasted from the wall, tied loosely into bunches and brought down as low as possible into a position where they can be conveniently covered with some dry protective material, such as Bracken, over which some Russian mats may be lightly bound. The branches should then be fastened securely either to the wall or to stakes, but the nearer they can be brought to the wall the more shelter they will get from rain, and the protecting material should always be kept as dry as possible. The old-fashioned way of protecting Fig trees, *i.e.*, bringing the branches quite down to the ground

and burying them in soil, is a really good method to apply to those trees whose branches are still supple enough to bear it.

CORNUBIAN.

KITCHEN GARDEN.

NOVEMBER CABBAGES.—Presuming a sowing of Cocoa-nut, Wheeler's Imperial or St. John's Day Cabbage was made in June, nice-sized white heads should now be plentiful. These are preferable to ordinary side sprouts produced by summer plants having been cut hard back and allowed to break again. Slight frost improves the flavour of these Cabbages, but in such an advanced state they will not stand much hard weather, especially should such occur immediately after soaking rains. They should be used freely while in a sound state. The more hardy Colewort may be reserved, as the plants which have not yet arrived at maturity will continue to grow and heart in, even in December, provided only ordinary frost occurs. Many gardeners do not now sow the main batch of spring Cabbage so early as formerly, as if September is warm and the ground sufficiently moist, the plants get too advanced in growth, especially in warm, sheltered gardens. Even in the midlands I did not sow till the end of July, and then the plants were too large and sappy in November to please me. I have known growth to be checked at this season of the year by thrusting the spade in on each side of the plants and severing the lower roots, but I do not care for the practice. Where this is done, the soil must be made very firm again by treading round each plant.

PROTECTING GLOBE ARTICHOKE.—It is, perhaps, rather soon to advise packing material round this somewhat tender vegetable, but as bad weather may come at any moment, it is as well to be provided with an ample quantity of the right kind of material, so that covering may be done expeditiously. A few gardeners do not favour covering the stools at all, but I am convinced that even on retentive soils it pays—that is, if the material used is of the right kind. To pile a quantity of semi-decayed manure round the roots as some do is simply to court disaster, as if this becomes saturated and afterwards frozen it only adds fuel to the fire, as it is converted into a soddened mass, which is sure to cripple, if not entirely ruin, the crowns and roots. What I prefer is a covering in November or early in December, if the weather remains open, of Bracken, or, failing this, light strawy litter, working this well in amongst the few remaining leaves and around the crowns, renewing the covering in January. Many postpone covering until frost has actually wrought mischief, which is, I believe, done sooner on strong soils than some people imagine. The practice of severing a number of stout surplus side offsets, say, in autumn, potting these up, and giving frame protection during winter is commendable, more particularly where the garden lies low and the soil is strong and retentive. Planted out in March with good balls of roots intact, nice useful heads are secured the first season. Let the frame in which they stand on a hard ash bottom be drip-proof, as if once wet gets into the centres, decay may ruin many of them. Jerusalem Artichokes may now have the old growths removed, if only for appearance sake, cutting them off about 6 inches from the ground. When lifting, preserve only the best and most even-shaped tubers for seed. This is the only way to keep a good stock true.

EARLIEST SEAKALE.—The time has now arrived when all who wish for early dishes of Seakale should get a batch of crowns into warmth. No advantage is gained by attempting to force badly ripened crowns, as these are generally slow in coming away and the growth is always inferior in size and quality. Where the advice given in spring was acted on and a sunny border planted with thongs for early work, these will now be valuable. The temperature of a Mushroom house, or, say, 55° at night, is suitable, as in such growth is sturdy and of good flavour. Some of the best Seakale forced indoors I have seen was produced

by embedding the crowns in leaf-mould in a brick partition between two Mushroom beds. The slight heat from each bed induced root-action, the top being covered with boards to husband all the heat possible. The partition was sufficiently large to admit of several batches in different stages being placed in. When extra early dishes are needed and well-ripened crowns are at hand, it may be accomplished by putting some half-dozen into a 12-inch pot, covering these with another inverted pot, and standing them on a board over pipes in a Pine stove or other similarly heated structure. I would advise lifting a good number of crowns from the most forward bed before the month is out, laying them behind a north wall in leaf-mould or ashes. This entire rest secures a readier response when placed in heat. The Lily-white is certainly a very fine, delicate-looking Kale, but I have an idea that it does not respond quite so quickly when placed in forcing quarters early in the season as the old variety. It has a very delicate appearance when dished up. After plunging the roots in leaf-mould I always soak the compost with warm water, and moisten overhead as required with the syringe, the slight steam engendered being beneficial to growth.

ENDIVE.—It will not be safe to leave Endive out on wet, exposed borders and quarters after this date, especially in the case of the curled varieties. With repeated rains and frost, the centres soon get crippled and practically spoiled. Any surplus plants of the latter section still out of doors may be blanched where they stand by simply covering them with flower-pots, or by placing broad slates flat on them when in a perfectly dry condition. In lifting the ordinary broad-leaved plants, see that they are quite dry; then tie up each with a piece of matting in order to prevent any soil finding its way into the centres. Where room is scarce the plants are sometimes of necessity crowded together, but, unless compulsory, avoid it, a free circulation of air between and around the plants being necessary to preserve them in the best possible condition, especially with plants that are to be kept till spring. Do not coddle, but, while admitting plenty of air, prevent, if possible, the ingress of snow or heavy rains. For latest supplies in spring I have found no variety surpass Fraser's Broad-leaved. It has a very hardy constitution and does not run to seed so soon as some sorts.

J. C.

TREES AND SHRUBS.

SOME ORNAMENTAL CRABS.

ALTHOUGH an orchard in bloom is one of the most beautiful sights that could be seen, the Apple tree for various reasons, including the ephemeral nature of its bloom-time, is not the tree that all desire for the adornment of parks and pleasure grounds. Yet we need not be altogether deprived of the glory of Apple blossom in such places, seeing that the numerous Crabs which we have not only excel in beauty of foliage and grace of form the homelier orchard tree, but also in the profusion and splendour of their blooms, and their fruit, if small, is often quite as effective. Among those introduced into our country, mostly from the Far East, there is a large number of hybrids and varieties, and the full knowledge and systematic grouping of the *Malus* race are very difficult to arrive at. One of the best known kinds is

Malus baccata, a tree with a pyramidal or dome-shaped crown which will grow to the height of 33 feet. The flowers of this type are pure white and fairly large, the leaves are long, oval shape, smooth and hard in texture. The fruit the size of a Pea or rather larger, is yellow or red in colour and borne on a long stalk. The fruit calyx falls soon after the blossom. The species has been freely hybridised, particularly with *Malus*

prunifolia, which in growth, foliage, and bloom resembles *M. baccata*, but has larger fruit, the calyces of which sometimes fall off and sometimes remain. These hybrid forms Wenzeg included in one, viz., *M. cerasifera*; often, however, they have been considered to be varieties either of *M. baccata* or *M. prunifolia*, as they happened to resemble one or the other.

M. prunifolia is in habit of growth and foliage very similar to *M. baccata*. The fruit is about the size of a Cherry, and a bright purple-red in colour. The fruit calyx, however, is not set in a hollow of the summit, but directly on the summit. The blossoms of the type are white, and the leaves are almost smooth. There are numerous hybrids of *M. prunifolia* the blossoms of which are tinged with rose and the under sides of the leaf more or less covered with hair. In particular the hybrids with *M. paradisiaca* are much to be recommended for the fair size and brilliant colouring of the fruit.

M. coronaria is a tree with broad and rounded crown and horizontal branches. It is a native of North America and will grow some 33 feet high, though oftener much smaller and sometimes quite shrubby. It is the latest in blossom of all Apples. The blossoms are rose-coloured or white with rosy flush or fleckings, and exhale a pleasant perfume of Violets. The leaves are broad elliptic or broad oval shape, the under sides being hairy at first and afterwards smooth and slightly lobed. The fruit, which is of fair size, long, and borne on slender stalks, is of a yellowish green colour and perfumed, and at both ends hollowed as in the cultivated Apple. A variety with rather narrower, more lobed, and more hairy leaf, is the variety *ivensis*, to which belongs the handsome variety known as Bechtel's Crab, which is distinguished for its scented rose-red blossoms. Closely related to the preceding is

M. angustifolia, but the leaves are smaller and narrower, generally unlobed, leathery in texture, and almost evergreen. It is a native of the Southern States, is nearly always of lower stature, and is even more to be recommended than the preceding. Very different in habit of growth is

M. spectabilis, which is tall in the crown with upright branches, and grows about 26 feet in height. It is native of China and quite hardy. The blossoms are white, flecked with red, and generally double; the leaves are long, slightly indented, on the upper sides glossy and on the under sides hairy. The fruit is globular, medium sized; the fruit-stalk also is not set in a hollow, and is stout and fleshy in texture. The hybrids of this variety are numerous, the best known being *M. Riversi*, a cross with *M. paradisiaca*, and *M. Kaido*, a cross with *M. Ringo*.

M. Ringo resembles *spectabilis* in habit of growth, but is smaller and shrubby. The blossoms are likewise flecked with rose. The leaves are thinly haired on the under side. The fruit is oval-shaped, generally yellow with red cheeks, hollowed out at the base. A handsome full-blooming pyramidal-shaped variety is *M. Ringo fastigiata bifera*, which often blooms twice in the autumn. A very handsome, distinct Apple is

M. Halleana (syn., *M. Parkmani*), which is a small tree 10 feet to 13 feet high, with a broad, open crown. The leaves are smooth and leathery in texture; the leaf-stalk is russet-coloured like the twigs, the blossoms rosy, double more or less, and gracefully borne on long, slender, red-brown stalks. The fruit is small, scarcely the size of a pea, and covered with russet. It ripens very late in the autumn, and the seed is remarkable for its large size. This Apple is one of the most ornamental and distinct in blossom, and is, like *M. floribunda*, particularly handsome in its branches. *M. Halleana* is a comparatively little-known species, and if not so abundant in bloom as some others, yet deserves a prominent place in the garden for the sake of its graceful shape and delicate colouring.

M. floribunda is one of the most deserving of a place in decorative planting as well as one of the best known kinds. It is always a shrubby tree, never much more than 10 feet or 14 feet

high; the branches spread more or less horizontally and its breadth is great in comparison with its height. The leaves are small and lance-shaped, indented, somewhat leathery of texture, and in the young leaf hairy. The blossoms are borne upon long stems, the buds are a dark purple-red, but the open blossoms are bright red or white and rosy flecked. The fruit is about the size of a Pea, yellow, and the calyx falls off. *M. floribunda* var. *atrosanguinea* is a very distinct variety, which has much to recommend it. Here the flowers change from deep purple-red to a bright rose colour. *M. floribunda* is a particularly delightful variety by reason of this changing colour of its blossoms; these in a single branch may display all gradations of tone from deep purple to tender red and white. A very handsome cross between it and *M. prunifolia* is

M. Scheidekeri, with its double, rose-flecked, abundant blossoms and its vigorous upright growth.

M. Toringo resembles *M. floribunda*, but is more straggling and looser in habit and the twigs often droop to the ground. The leaves, which are more or less lobate, are a dead light green. The blossoms are less striking than in *floribunda* and rose colour on the outside only. The fruit is very small and is formed of three or four compartments, whereas in *M. floribunda* it is formed of five. *M. Toringo*, if less handsome than *M. floribunda*, is to be recommended on account of its low growth for planting in front of taller shrubs. A striking variety, which is known to me only as a small specimen, is

M. Niedzwetzkyana. The branches of this are a deep brown colour; the leaves are at first a deep red-brown, changing later on to deep green, and the fruit and flowers are red. It is a native of the Caucasus and closely related to *M. paradisiaca*, the parent stock of our cultivated Apple.

M. cratægifolia and *M. rivularis*, both with small fruit and white, not very showy blossoms, are of little importance for decorative planting, and are found only in botanic gardens now and again.

In spite of their close relationship, there is a great difference between the varieties as regards habit of growth, which allows of a wide choice in their use for the park and garden. Thus for grouping among the higher trees, *M. baccata*, *M. prunifolia*, and *M. cerasifera* are well suited, and for something lower, *M. spectabilis*, *M. coronaria*, and *M. Halleana*. In planting in the forefront of the higher trees, *M. floribunda*, *M. Toringo*, and *M. Halleana* are to be recommended. To the handsomest Crabs, as regards blossoms, belong the tree-like *M. baccata* and *M. spectabilis*, and the lower-statured *M. floribunda* and *M. Halleana*. On account of its late bloom time and its large, agreeably-scented blossoms, *M. coronaria* is particularly deserving. The most decorative as regards their fruit are *M. prunifolia* and *M. cerasifera*, also *M. baccata*, with its numerous varieties and forms. For profusion of blossom and beauty of fruit, combined with their indifference to soil and situation and perfect hardiness, the Crabs are well deserving of a foremost place among flowering and ornamental fruit trees and shrubs.—*Deutsche Garten Zeitung*.

Hibiscus (Althæa) celestis.—Most readers will, I think, agree with J. C. Tallack (p. 326) as to this variety being one of the most beautiful of all the garden forms of this species of *Hibiscus*. It can scarcely, however, be regarded as new, for it is at least fifteen or sixteen years ago since I first became acquainted with it. The variety *celestis* is, I believe, of continental origin. Other good single varieties that have come under my notice are *totus albus*, pure white; Painted Lady, bluish-white, with a crimson blotch at the base of the petals, which received an award of merit from the Royal Horticultural Society two years ago; *roseus striatus*, pink, striped with a

deeper tint; and one met with in some nurseries as *albus*, a pure white flower with a conspicuous crimson blotch at the base of the petals, thus forming a crimson centre to the blossom. This I take to be the typical *Hibiscus syriacus*, or *Althæa frutex*, and if so, it is certainly equal to any and superior to most of the garden varieties.—T.

Catalpas fruiting.—Reference has been made to the fruiting of two varieties of *Catalpa* recently in THE GARDEN—*syringifolia* and *bignonioides*—which, though perhaps not of rare occurrence, is not common. No doubt the great heat and drought of the present and past years' summers account largely for this. I have seen several trees more or less freely fruited this year—at Heywood, Wilts, Rood Ashton and Gunnersbury House. The last-named is the one referred to in THE GARDEN of September 23, and is much the freest-fruited specimen I have ever seen. It is not so large as either of the other trees mentioned, but there are more seed-pods on it than on both the others put together. It would seem that this fruiting is somewhat general, as in Mr. Webster's note he speaks of the abundant flowering of the *Catalpa* all over Southern England. The two first-named trees I have seen in flower for several seasons, but until last summer no pods were noted, and then only a few. The Gunnersbury tree was a perfect picture. Its position did not seem to me to be the most favourable for giving such a wealth of fruit, as it stood in a break of other trees. The only inference that could be drawn seems to be its protection from frost and cold winds and the husbanded sun-heat gathered from the nature of the surroundings. The *Catalpa* is such a distinct and ornamental tree, either as a lawn specimen or planted in a clump, that the wonder is more planters do not favour it. It is so late in coming into leaf, that the older native labourers here regard it here as a sign of safety for putting out the more tender bedding plants when the *Catalpa* buds burst into leaf, which is not until the month of May is more or less advanced. It would be interesting to learn from other readers whether the fruiting of the *Catalpa* is general in the warmer counties.—S.

BIGNONIA RADICANS.

I HAVE seen one or two notices about the beauty of *Bignonia radicans* lately in THE GARDEN. I have one I planted some ten or twelve years ago in a S.E. corner which has a stem nearly 6 inches in diameter. It is the major variety. When I first had it I wanted it to grow so as to form a coping to a wall, which it will do if the soil suits it, because the shoots cling and run along like Ivy, but the border I planted it in was a rich one, and though it lived it did not increase in thickness of stem, nor did it send out any fresh shoots. Seeing one day in THE GARDEN that it grows on hills and naturally roots like a Vine amongst rocks, &c., I moved it to its present position beside an old lean-to potting-shed with an ugly roof, which it now completely hides and is a sight to behold every season. In making alterations I had to raise the ground some 3 feet on my garden side to the level of the field behind, which I had bought in order to make a cart road into the field. This I did by heaping up some 3 feet of broken tiles I had handy and surfacing with gravel. I had forgotten this when I ordered my gardener to plant it where it now grows so well, and well do I remember his look of disgust when I came home in the afternoon and found him with a crowbar still working out a hole to plant it in and not finding any soil. As he had got down some 3 feet I told him to stop and to fill up the hole with some soil and plant it.

The next season it started into vigorous growth, and in about twelve years has reached its present proportions. I kept layering the terminal shoots every year till it had covered the space I wanted, from which every year from every joint it throws up shoots some 3 feet long, each terminated by a magnificent bunch of its orange-red flowers. These annual shoots at about the end of March I prune back to one or two base buds, and the

display is reproduced every season. To show how it likes and has taken possession of its well-drained mass of old tiles, I may remark that suckers from the roots are constantly springing up in the roadway and as far as 10 feet from the base. It is rather difficult to strike, but if at the spring pruning some of the shoots are laid in at the foot of a wall, as one does scions of Apple trees to keep them plump, longways and buried about 6 inches, they will root from the joints and throw up shoots the following year; these can be lifted, and make nice plants without any trouble.

Colchester.

H. D. PALMER.

YEW TREE POISONING.

LAST week a fine four-year-old cart-horse, in the best of health, was turned into a paddock adjoining my garden in Wiltshire. On the next morning he was observed to be grazing, about 9 a.m., without a symptom of illness. About 9.30 a man who was near saw him floundering against a gate. He then recovered himself to some extent, blundered on for some 15 yards, supporting himself to some extent by an iron fence, and then tumbled over, taking the fence with him, and, after a few kicks in the air, was found to be dead. That morning he was opened by the local veterinary surgeon. All the organs were healthy—no trace of any poison was to be found—but in the stomach there were from twelve to twenty shoots of Yew, about 3 inches long apiece, unchewed, lying on the surface of the stomach. No one connected with the place was aware that there was any Yew tree accessible from the field, but after minute research there was found to be one stunted specimen of an Irish Yew under a Beech tree, almost merged in other little shrubs, and from this it was evident some shoots had been recently torn off. The nearest could not have been less than from 2 feet to 3 feet distant on the inside of the fence, and the horse could only reach them by straining his neck over the iron fence, which had a barbed wire running along the top bar, and tearing them off, for they bore signs of being torn rather than bitten off, and were so undamaged in the stomach that some of them were afterwards fitted to the branch from which they were taken. The horse seems to have died within ten or fifteen minutes of the first shoot having been eaten. It seems extraordinary that the virus of the undigested shoot should have been so powerful as to destroy vitality so completely and in so short a time.

I may add that calves and horses and a donkey have been in the field throughout the summer with absolute impunity.—GRANVILLE R. RYDER, in *Times*, October 12.

Choisya ternata.—Considering what a beautiful plant this is when it does well, it is surprising that it is not much more grown—at least in the southern and western counties. It is hardy when well established on a suitable soil, and that is a deep holding loam, not very wet or cold. Here growth will be very free in summer, and the beautiful white flowers will be freely produced in spring. Like the *Andromedas*, it is apt to start away rather early in spring, and should cold winds occur, the young foliage is often cut about, but the plants get over this, and by midsummer are a mass of the bright glossy leaves. Sometimes in a fine summer a second lot of flowers is produced, but these are seldom so good as the first. The flowers and foliage have both a rather pleasant scent, and both are nice for cutting. The best place for *C. ternata* to flower is on a sheltered wall, but here the plant is not so pretty as when grown into a large, rather spreading bush in the open. It is one of the plants that so easily strikes root, that nurserymen can easily supply it not grafted, and if it is required to be propagated at home, take cuttings of the half-ripened shoots now and place singly in pots in a greenhouse or frame.—H.

Viburnum plicatum.—On p. 325 attention is directed to the value of the sterile form of our

native *Viburnum* and also of the Chinese *V. macrocephalum* for forcing into bloom early in the year, but no mention is made of the Japanese *V. plicatum*, than which there is not a more beautiful kind either as a shrub in the open ground or for flowering under glass. It has of late years been largely grown for this latter purpose; indeed, though by no means a novelty, it is only within recent times that its merits have been generally recognised. At one time it was considered tender, and this idea limited its planting till our American cousins repeatedly called attention to its great beauty, the result being a far more general recognition of the value of this beautiful shrub. Now considerable numbers are grown for forcing alone, not only in this country, but also by the Dutch cultivators. Like the other *Viburnums*, this must not be forced at all hard, but brought on gently, otherwise the display of bloom will be but meagre; whereas when assisted with a little heat it flowers so freely that the entire bush will be quite a mass of blossoms. The partially expanded plaited leaves are of a

Escallonia macrantha, while *E. montevidensis* still retained a few of its white flower-heads at the commencement of the month. The *Habrothamnus* in a sheltered corner showed a cluster or two of tubular crimson flowers, and the double Jew's Mallow (*Kerria japonica* fl. pl.) against a cottage wall was bearing a goodly number of orange blossoms, while the *Laurustinus* is rapidly changing the maroon of its flat flower-heads to white as the blooms expand, but the tasselled bracts of *Leycesteria formosa* are now flowerless. *Koeleria paniculata* has been particularly gorgeous in its autumnal colouring, and the Snow-berry (*Symphoricarpos*), absolutely loaded with its white balls, has created a surprisingly striking effect where planted in breadths at the edge of the shrubbery. The large standard *Magnolia grandiflora* continued to expand its fragrant ivory-white chalice to the end of the third week in the month after twenty weeks' profuse blossoming. Many of the shrubby *Veronicas* are in flower, and in a sequestered garden the massive flower-spike of a *Yucca* stands out prominently, while the



Woodwardia out-of-doors (Cornwall). (See p. 393.)

pleasing bright green tint. As an outdoor shrub it is unsurpassed for its wealth of blossoms, and its distinct, somewhat spreading habit imparts to it quite a distinct appearance.—T.

Ornamental shrubs of October.—*Abutilon vexillarium* has continued to produce its crimson and yellow blooms on slender arching shoots, and *Abelias* have borne a few flowers, while the ivory-white inflorescence of *Aralia spinosa* was noted in the early days of the month, after which the large deeply-cut leaves became highly decorative as they changed colour. The autumnal tints of the *Amelanchier* have also been extremely beautiful. The Strawberry Tree (*Benthamia fragifera*) is thickly set with its crimson fruit, and the *Barberries* have been ornamental both in their fruit and foliage. *Caryopteris mastacanthus* bore its pale blue flower-heads well into the month of October, and the Mexican Orange Flower (*Choisya ternata*) and the yellow-flowered *Cytisus racemosus* were both to be seen bearing autumnal bloom here and there, as was the pink-blossomed

feathery plumes of *Pampas Grass* and *Eulalia* have attained perfection.—S. W. F.

Sedum amplexicaule.—Those who admire alpine flowers can appreciate and take an interest in plants which may be of value to the botanist, but which those who only care for flowers of brilliant effect do not trouble about. The former may think *Sedum amplexicaule* worthy of a remark or two, but the latter will assuredly think it beneath their notice. Yet it is a plant which, when seen in autumn, is an object of much curiosity on the part of visitors to the garden to whom it may be pointed out. The curiosity is tempered, it may be, on the part of some unversed in the ways of plants by a little incredulity when informed that the apparently dead fragments of a plant will before long spring afresh into life. One can well forgive this touch of incredulity because one knows that it arises from want of knowledge, and a feeling that one may be too

sanguine in expecting that that singular-looking object can ever become the source of plant life. *Sedum amplexicaule* is in late summer and early autumn reduced to greyish, swollen, spiny-looking stems, which look more like some dead creature of the sea or air than a plant. Later, from these stems rise the green leaves. These are verdant throughout the winter, and in early summer the greenish yellow flowers are produced. There are several forms of this plant, or, it may be, two or more species of similar habit. There are here three forms differing but little from each other. One came as an Italian form. Another was called *S. "retrofractum."* It was sent with a query added to the name, and one has little hope of ever ascertaining with confidence whether or not the query is justified. At the present time these Stonecrops are pretty in the rock garden, with their neat green carpets of foliage.—S. ARNOTT.

THE USEFULNESS OF BIRDS IN GARDENS.

IN each order of the animal kingdom there are species both useful and hurtful, the latter seeming to increase in number as the scale descends. Insects, for instance, are generally to be feared; whereas the presence of birds is in very many cases of inestimable benefit. They are the best friends of plant life. They seem to have been created specially to keep in check the multitudes of insects which swarm upon foliage and even attack the bark of trees. A rapid view of our native birds will be enough to show us how much good the garden derives from their presence.

Buzzard.—This is a very inactive bird; ordinarily perched on a post, a mound of earth, or a stone, it spends a good part of its existence in a state of inertia. The food of the buzzard is composed of mice, moles, young or disabled birds, frogs, lizards, serpents, the larger insects, and worms. Mice, however, are its favourite food. It watches the holes of these rodents, and when the little furred tenant makes his appearance snaps it up in a twinkling. It costs the lives of twelve to fifteen mice a day to keep the buzzard in food; nay, as many as twenty have been found in the crop of a single bird. It is computed that one buzzard will on an average destroy 5000 to 6000 mice in a year, not counting those which go to furnish food for the young buzzards. The buzzard seldom attacks game, being but poorly provided with arms for such encounters unless it be some sick or disabled bird, or perhaps a young hare. For casual poaching of this sort, however, it ought not to be condemned, as its usefulness far surpasses the harm it occasionally does in this way.

The kestrel.—This also lives chiefly upon mice and insects. Its favourite haunt is the church roof and among old ruins, where it keeps a ceaseless look-out for its prey.

Owls are equally beneficial to agriculture by reason of the quantity of mice they devour, which is a strong argument for their protection. Charles Waterton, the naturalist, protected the owl and established him in the neighbourhood of his own dwelling. "If these birds," he said, "only came out in the daytime, one could then perceive what numberless quantities of mice they destroyed, because, when rearing their young, they take a mouse to the nest every twelve or fifteen minutes." He speaks of having collected a peck of balls of fur, the excretions of owls during a period of sixteen months, and which he found among the ruins. Generally speaking, all owls, large and small, are of great utility in the country, excepting the great horned owl, which does great harm by destroying game. The smaller kinds of owl are so necessary to agriculture, that their propagation might well be assisted and a hollow tree left here and there for their habitation. Wherever there are several of these birds one can surely count upon the extermination of mice, and the

good which they effect in this way is far above the profit one might get by cultivating the ground occupied by such trees. The Belgian farmer, however, is so much bent on utilising every little corner of his land that every hollow tree must go, so it happens that owls which live only in the hollows of trees have almost totally disappeared from Belgium.

The Fern owls are productive of great good by the nature of their food and their voracity, as they consume innumerable quantities of butterflies the caterpillars of which are so destructive. After sunset they capture swarms of gnats, which disport themselves among the marshes, and exterminate thousands in a very short space of time.

Swallows also live entirely upon insects, which they seize on the wing. They are always hungry, and the chase after food continues far into the night. The good that swallows do is well known; they destroy legions of noxious insects, and for this reason their propagation ought to be encouraged. Cleanliness, however, requires that when the breeding time is over the nests should be demolished, as they always swarm with vermin.

The flycatcher also is extremely useful, and might be called the martin of the wood. It destroys a host of insects noxious to man and beast. The shrikes also are of the number of benefactors, but these are accustomed to prey on insects much larger than grasshoppers and butterflies.

Crows and rooks often follow the labourer to the field to pick up and feed upon the insects which the plough has uncovered, including the grubs of cockchafer, and later on, when the season is more advanced, the cockchafers themselves fall victims to their appetite. The method of the rook is to alight upon some tree where these cockchafers are to be found and shake the branches by the movements of its body and wings, so that the cockchafers are thrown to the ground, whence they are easily picked up and devoured. The presence of these birds is beneficial in agricultural places, as the birds and eggs which they occasionally destroy are not to be compared with the multitudes of hurtful insects which they devour. There are localities where, owing to a false prejudice, the crows have been completely destroyed, and too late the good they might have done has been recognised.

Nightingales, redbreasts, linnets, finches, tits and wrens feed principally upon insects, some also on worms and caterpillars, but for the most part they live upon berries in the late season. What evil they do is of little importance, whilst their usefulness is great in exterminating a host of noxious grubs. By many the usefulness of

The tomtit is unrecognised. Yet this bird searches out in the Moss which covers the stems of trees the eggs of butterflies, *Gastropacha neustria*, *Liparis dispar*, *Gesmetra hirtaria brumaria*, &c., and in addition a multitude of caterpillars. Besides being actively useful, there is nothing to be said against this bird in any way. In winter it lives upon the seeds which it stored away in the autumn. The tomtit builds in the holes of trees, where it makes a nest of very simple construction, in which it deposits ten to fifteen eggs. As the presence of these birds is of immense benefit in orchards, it is the practice, in the absence of hollows in trees, to supply a substitute for these in the shape of boxes made like those used for tame starlings, but rather smaller, say 6 inches long and 4 inches wide, inside measurement, with a round hole in the upper part at the side large enough to admit the bird and small enough to keep sparrows out. The roof should be slightly slanting, so as to let the rain water run off, the whole being covered with bark and Lichen in order to look like a part of the tree itself, and fastened to the stem of a fruit tree. One such box sheltering several tomtits will suffice, especially if the birds are young, when they are very voracious in the destruction of all the insects in a garden, a result which would be impossible without these birds, whatever other precautions might be taken.

The tree creepers inhabit woods and orchards where the bark of the trees is thick and rugged, never ceasing to climb and flit about in quest of the insects and grubs on which they feed. They do not appear to be so fond of seeds and grains, which they swallow without taking the trouble to open. They are beloved of the farmer and gardener, as they keep the fruit trees clear of caterpillars.

The nuthatch runs along the branches, and hops from twig to twig in a continuous hunt after the insects and worms which form his food. He is a remarkable climber, and even clings upside down to the undersides of branches. The nuthatch is very fond of caterpillars and the eggs of butterflies, which he eagerly searches after in the hollows and fissures of trees. He also eats seeds and all kinds of grain, even the hardest. His way of opening nuts, of which he is very fond, is to place them in a narrow fissure, and, gripping hold of them at the same time, uses his beak with such violence that in the end the shell is broken. For the winter the nuthatch lays in a store of nuts and berries, which he hides in the hollows of trees, where also he builds his nest. When the nest is quite made he walls up the opening with clay, leaving an aperture hardly large enough to admit of his own going and coming.

The wryneck, which is allied to the woodpecker, is known for its remarkable way of turning its neck in circles like a snake. It is never found in treeless places, but neither is its home in the denser forests. It clings obliquely to the stems of trees, and remains so poised for some minutes. It is not made for climbing, and its tail, owing to its extreme flexibility, affords it no leverage. It, however, flits from branch to branch with ease and can run along the ground very swiftly. It is fond of its bath also. The food of the wryneck consists principally of insects, grubs, and the eggs of butterflies and ants, which it takes by thrusting its long viscous tongue into the cracks and hollows of trees or by darting out its tongue. It has the reputation of being a very useful bird and one that does no harm. The female wryneck lays her eggs in the holes of trees in the dust of decayed wood without any preliminary preparation. These same holes are used by these birds as night shelters.

The woodpecker is a very active bird, constantly on the move examining the bark of trees for insects, grubs, caterpillars and butterflies' eggs, which it seizes with its long and adhesive tongue, or when this is not long enough it splits the bark with repeated blows of its beak and so gets at its food. The woodpecker builds in decaying trees, which also serve as shelter in the night-time. Its instinct is unerring in selecting the tree for its purpose. Its dwelling it hollows out with its beak with infinite pains and skill. It is careless in the construction of its nest, and a few chips form the only bed of the young brood. As this bird never selects a sound tree for this purpose it is not destructive. It is rightly regarded as a useful bird by reason of its ridding the trees of great numbers of insects and caterpillars.

The cuckoo feeds chiefly upon insects and caterpillars, even those of the hairy kind, such as *Bombyx dispar* and *B. pini*. It is quite common to find the hairs of these caterpillars in the stomach of a dead cuckoo, and sometimes completely lining it. As they are very greedy birds they consume a prodigious quantity of caterpillars. They have a right, therefore, to be considered as very useful birds for the plantation and forest. One may get an exact idea of their utility when one considers that the *Bombyx pini* lays 600 to 800 eggs and lays twice in a year. The multiplication of these insects would be frightful but for the great voracity of the cuckoo. The cuckoo devours eggs, grubs and caterpillars with an eagerness which knows no interruption except during the period of sleep, as it eats continuously. It is easy to estimate the number of these insects devoured by the cuckoo. Suppose one cuckoo to devour a single caterpillar every five minutes in the long summer days of fourteen hours, we may estimate the number disposed of

in one day at 168. According to this computation, 100 cuckoos consume 16,800 caterpillars per day. Assume the number of female butterflies among these to be 8400, and that each female lays 500 eggs, the result is that in a single day 100 cuckoos will have destroyed 4,200,000 caterpillars. How precious the existence of the cuckoo is to plantations and forests can therefore be seen at a glance. We know how the Pine forests especially suffer from the over-multiplication of caterpillars, and instances are frequent within our own knowledge of plantations which were infested by these noxious insects having been cleared of them in a very short time by bands of cuckoos *en route* for warmer climes chancing to pass that way, the consequence being that in the following year there was no cause to regret the presence of these insect pests.—*Semaine Horticole*.

ORCHIDS.

ONCIDIUM VARICOSUM.

For winter blooming there is probably no other in the genus to surpass this fine *Oncidium*, and although it may not be so easy to cultivate as some, there is no question that it is very badly treated in many collections, and this accounts for a large number of the plants that reach this country soon dying. It will be a long time probably before this and similar kinds are all gathered from their native habitats, but this is no reason why such lovely plants should be so badly treated. There is a natural anxiety on the part of those who purchase newly-imported plants to see them flower, and to tell such to remove the spikes when they show is useless. But at least the plants may be relieved by taking off most of the flowers, allowing a few to form to see what the variety is like, and removing these early. What is the use of flowering a fine variety if its flowering is going to cause its death? Far better get some vigour into it first and then let it flower properly. With regard to compost and repotting, the best way to keep the roots alive over a number of years is to have them healthy at first, and as soon as the peat and Moss begin to show signs of decay, let these be removed and replaced by new. If the plants will not stand the disturbance of removal one year, they certainly will not after another season of growth in sour or decayed material. The longer they are left, in fact, the less likely are they ever to be of any further value as flowering plants.

Another mistake frequently made in its culture is treating it like a stove plant. Although *O. varicosum* likes a moderate amount of heat,

it does not require to be always in a hot and very moist state, as though this enervating condition may at first produce apparently good results, fresh green leaves and large pseudobulbs, the hardening influence of sun and air is needed to give this growth proper stamina. One may grow a Vine at a tremendous rate, and an inexperienced person may think the treatment satisfactory, but those who know the results of this forcing condition are quite aware of how unsatisfactory the Vine would be from a fruiting point of view. And so it is with these South American *Oncidiums*; they require something more than to be merely excited. The best plants I know of *O. varicosum* are grown in a fairly large house devoted to various *Cattleyas* and *Laelias* besides some of the warmest section of *Odontoglossums* and evergreen *Dendrobiums*. Rather a curious mixture, some may say, but by careful arrangement all or nearly all are satisfactory. It is kept at an intermediate temperature, rather below than above that of the usual

ately, is not plentiful, though hundreds of plants so labelled are included in some collections. The feature of the flower is the beautiful chrome-yellow lip, which is broad and roundish; the sepals and petals are dull yellow with brown workings. Strong plants produce spikes a yard and a half long, much-branched and many-flowered. H. R.

***Dendrobium infundibulum*.**—In a small receptacle close to the glass in the coolest part of the *Cattleya* house this pretty *Dendrobium* thrives, but I have never been able to do very much with it in more heat or in a really cool house. The effect of the one is that the plants grow weakly and often out of season; in the other it is not free enough, and winter comes before the growths are finished. Equal parts of peat-fibre and *Sphagnum Moss* over good drainage suit it well, and during the time the plants are growing frequent damping overhead is advisable to keep thrips in check.—H.

***Odontoglossum odoratum*.**—This may be grown by anyone having a cool Orchid house, and



In a Cornish garden. (See p. 393.)

Cattleya house, and the baskets and pans in which this *Oncidium* are growing are suspended in the coolest part near a ventilator. Here the growth is not particularly rapid, but it is free enough; there is the whole summer to do it in and it is useless hastening the plants unduly. Just now the spikes on these are unfolding their first flowers, and in a week or two they will make a fine display. *O. varicosum* likes ample supplies of moisture all through the growing season and while in flower, a much reduced supply sufficing when at rest.

The flowers in the typical form are not so large as in the true *O. v. Rogersi*, but this, unfortun-

although some of the varieties are rather poor, there are some good ones among them, and these are well worth growing. I have had it with spikes nearly a yard in length covered almost from end to end with the pretty sweet-scented flowers. The usual colour is a pale straw-yellow, with spots of crimson and brown, but there are darker forms and some nearly white. *O. odoratum* is also known as *O. gloriosum*, good forms of it having received this name.—H.

***Odontoglossum blandum*.**—This pretty species I have received for a name. It is usual for this to flower in early spring, but possibly the flowers sent are from a newly-imported plant which has not yet settled down to its season. O.

blandum is an uncommon little plant, worth growing in the best of collections, and the charming white flowers, with their distinct purple spots, are sure to be admired. The place to grow it is quite up to the glass and close to a ventilator in the cool house. It is a native of high alpine latitudes, so anything approaching a stuffy or close atmosphere should be avoided. During the season of growth the syringe should be freely plied about the bulbs and leaves, applying the water in the form of a very fine spray. The plants do best in very small receptacles, like the hanging pans now so much in use. The roots cling closely to these and stand more moisture than they would do in large pots. Thus they can be kept nearly always moist, a condition in which they are found growing naturally. It is a very difficult Orchid to import, and this has made it scarce under cultivation.

Cypripedium insignis giganteum.—On the last meeting of the year held on December 15, 1896, the late Major Mason and Mr. E. Ashworth each showed plants of *C. insignis* which were so nearly identical, that the Orchid committee could not distinguish sufficient differences to recognise the two names under which the plants were placed before them. Mr. Ashworth's plant was again shown in a great deal better condition, and was awarded a first-class certificate on December 13, 1898, as *C. i. Harefield Hall* var. It was undoubtedly one of the finest varieties of *C. insignis* that has ever been seen. There is no record of the late Major Mason ever again exhibiting his plant. It was not until the recent sale of the collection at The Firs that the plant first shown as *C. i. giganteum* again became prominent. Two small plants of two growths each were included in one lot, which when offered realised 140 guineas, the plant, I believe, passing into Mr. Ashworth's collection. We may thus look forward for another opportunity of being able to determine the distinctive features of the two varieties when grown side by side under similar conditions.—H. J. C.

SOCIETIES AND EXHIBITIONS.

NATIONAL CHRYSANTHEMUM SOCIETY.

NOVEMBER 7, 8, 9.

THE chief exhibition of this society, held on the above dates at the Royal Aquarium, was of a very high order of merit. Chief interest centred around the competition for twelve vases Japanese blooms, each vase containing five blooms of one variety. The exhibits were staged in St. Stephen's Hall, and the blooms kept wonderfully fresh for the whole of the three days of the show. Great change was noticeable in many instances when compared with what was the rule some year or two back, the plan of arranging large exhibition blooms in vases instead of on flat boards, creating a pretty effect and showing the value of the large handsome flowers for decoration. Fine quality was represented in the majority of the Japanese blooms, and the incurved flowers, too, were much better than many expected. Anemone blooms made a charming display, ably supplemented by other types of the Chrysanthemum. Three displays made by a similar number of trade specialists were also remarkable features. Vegetables were also represented in splendid condition. Both dessert and cooking Apples were staged in large numbers, the competition being keen and the quality of an exceptionally high order of merit.

OPEN CLASSES—CUT BLOOMS.

One of the chief classes was that open to Chrysanthemum and horticultural societies. In this case there were five competitors. The leading position was occupied by the Portsmouth and District Horticultural Society, the blooms being contributed by Messrs. J. Agate and C. Penford, members of that society. The Japanese blossoms were good and the incurved sorts distinctly meritorious. The Japanese were represented best by Mrs. J. Lewis, a pure white, in grand form this year; Mons. Pankoucke, still a good yellow;

Percy Penford, a new bronzy yellow seedling; Florence Molyneux, the best new white Japanese incurved, and the finest novelty of the season so far; Mrs. Mease, Mrs. White-Popham, Mons. Hoste, Mme. Carnot, and the new yellow flower Miss Edith Pilkington. The most noteworthy of the incurved flowers were Lady Isabel, Globe d'Or, Chas. H. Curtis, Violet Tomlin, shown well this season, Mme. Darrier, Ernest Cannell, a pretty deep fawn colour; Jeanne d'Arc, and a charming bloom of the refined Princess of Wales. This exhibit was very closely followed by the Sevenoaks and West Kent Gardeners' and Amateurs' Society, Mr. W. Tebay, gardener to Mrs. Rycroft, Everlands, Sevenoaks, contributing the whole of the flowers. Both types of the flower were in fine form, the Japanese being represented best by a grand bloom of Mme. Gustave Henri (white), Mrs. Lewis, Mutual Friend, Mrs. Mease and G. J. Warren. Incurved were seen best in Ernest Cannell, a grand flower; Miss Dorothy Foster, a lovely silvery mauve colour; Chrysanthemum Bruant, a new continental sort of splendid size, of a beautiful rosy buff colour; George Haigh, W. Tunnington, Duchess of Fife and Jeanne d'Arc. The Bromley and District Chrysanthemum Society was a good third, no less than eleven men of Kent contributing flowers. The Japanese were very strong, the exhibit losing points in the incurved display. This was one of the best competitions for the challenge trophy since its institution. The leading class for incurved blooms was one for thirty-six distinct varieties, and the four competitors made an excellent display. Mr. W. Higgs, gardener to Mr. J. B. Hankey, Fetcham Park, Leatherhead, was first with large, neatly incurved, globular blossoms, and fairly even throughout. Exceptionally good were Duchess of Fife, still the largest white; Mrs. H. J. Jones, another handsome white, with broader petals than the last named; Chas. H. Curtis, Hanwell Glory, a large, bright bronze flower of splendid globular shape; Yvonne Desblanc, pearly white; Countess of Warwick, a large, handsome flower; D. B. Crane, Mme. Ferlat, George Haigh, Lady Isabel, Lalene, a pleasing rosy violet; Ma Perfection, Chrysanthemum Bruant, Bonnie Dundee, and the members of the Princess of Wales family. Mr. G. J. Hunt, gardener to Mr. Pantia Ralli, Ashstead Park, Epsom, Surrey, was second with a less even lot of flowers. For forty-eight Japanese blooms, distinct, there were six exhibitors, and not a bad lot was staged. The leading stands left very little to choose between them, and ultimately Mr. F. Vallis, Bronkham Fruit Farm, Bronkham, Chippenham, led. His blooms were very large in the back and middle rows, the front row in many instances showing a decided falling off. The colour, too, in most cases might have been improved upon. The flowers of special merit were G. J. Warren, one of the best in the show; Nellie Pockett, white; Edwin Molyneux, Mutual Friend, Mrs. Barkley, an enormous flower, soft rosy mauve, broad strap-like petals; Mons. Hoste, Mrs. Coombes, a soft silvery pink; Mme. J. Bruant, Mrs. J. Lewis, Pride of Madford, Wm. Bardney, a new incurved Japanese, velvety crimson inside petal, silvery reverse; Emily Towers, Mr. A. Barrett, Mme. M. Ricoud, Simplicity, Phœbus, M. Chenon de Leche, Souvenir de Mme. F. Rosette, Australie, Swanley Giant, Oceana, Edith Tabor, Lady Ridgway, a salmon-buff, incurved Japanese; Mme. Carnot, Lady Hanham, and Vivand Morel, the latter two still good. Second prize was awarded to Mr. J. W. McHattie, gardener to the Duke of Wellington, Strathfieldsaye, Mortimer, Hants, who was close to the leading stand. His blooms of Le Grand Dragon, Chas. Davis, Mrs. H. Weeks, Préfet Robert, Mons. Hoste, Mrs. White-Popham, Soleil d'Octobre, Mutual Friend, G. C. Schwabe, and Edwin Molyneux were excellent. The five competitors for twenty-four Japanese blooms, distinct, made a capital display, Mr. McHattie easily leading with a large, fresh, and even lot of blooms of good colour and form. The best were Australie, Edith Tabor, Mons. Hoste,

Australian Gold, Milano (a splendid flower, colour cherry-carmine), Mrs. Mease, Mrs. H. Weeks, and Lady Hanham. Second honours were well merited by Mr. W. Meredith, gardener to Mr. Geo. Wilder, Stanstead Park, Emsworth, Surrey, who showed Australie, Master H. Tucker, Mons. Pankoucke, Mme. Carnot, and Mons. Hoste well. For twenty-four incurved blooms, distinct, there were only two competitors, Mr. W. Higgs leading with a nice lot of flowers, novelties such as Hanwell Glory, Chrysanthemum Bruant, Lalene, Mme. Ferlat, D. B. Crane, Mme. Ed. Roger, Countess of Warwick, and Lady Isabel standing out most prominently. Second prize was awarded to Mr. G. J. Hunt, whose blooms were uneven in size, novelties in this instance again standing out conspicuously. For twelve incurved blooms, distinct, Mr. Silas Cole, gardener to the Rt. Hon. Earl Spencer, K.G., Althorp Park, Northampton, led with very deep globular flowers of good quality, Mrs. R. C. Kingston, a pretty lilac-pink, striped white, of good form; Charles Curtis, Countess of Warwick, Topaze Orientale, very large, pale straw colour; Ma Perfection, a beautiful flower, pure white; Princess of Wales, and Violet Tomlin, being the best. Second prize was won by Mr. F. G. Foster, Brockhampton Nurseries, Havant, who staged large but irregular flowers, novelties in this case making an excellent show. The good qualities of Chrysanthemum Bruant and Countess of Warwick were again apparent. The class for six incurved blooms, one variety only, is always interesting, and the five stands contained a pleasing variety. Duchess of Fife was represented in magnificent condition by Mr. W. Higgs, large, even, globular flowers securing first prize, second prize going to Mr. Hunt for the same variety, but for flowers distinctly smaller and also very shallow. Six blooms white Japanese, one variety only, were this year shown in vases, and a pleasing break away from the orthodox this proved to be. Mr. J. W. McHattie led with a grand vase of Mrs. J. Lewis, snow-white, and in magnificent condition, Mr. W. Higgs following with a lovely vase of the popular and graceful flower Mme. Carnot. In the class for a vase containing six blooms Japanese, yellow, one variety only, there were six exhibitors, Mr. W. Higgs leading with superb examples of Mrs. Mease, Mr. Wm. Allan, gardener to Lord Suffield, Gunton Park, Norwich, following closely with grand examples of the bright yellow variety Phœbus. Six Japanese blooms, any colour except yellow and white, these also exhibited in a vase, were well staged by eight competitors. In this case Mr. McHattie was again first with very handsome blooms of Australie, Mr. H. Perkins, gardener to the Rt. Hon. W. F. D. Smith, M.P., Henley-on-Thames, second, with smaller examples of the same variety. Mr. McHattie again led for six Japanese blooms incurved, distinct, showing a capital even lot of heavy, massive, and solid-looking blooms—Duke of Wellington, colour deep salmon-buff; Mme. Desblanc, very fine; President Bevan, Swanley Giant, N.C.S. Jubilee, and Préfet Robert. Of the remaining six exhibitors, Mr. H. Perkins was placed second with Australie and a white seedling in good form. There were but two entries for six Japanese blooms, hairy-petalled, not less than three varieties. A pretty lot received first prize, this being sent by Mr. John Justice, gardener to the Rt. Hon. Sir R. Temple, Bart., The Nash, Kempsey, Worcester, with a nice variety of well-grown blooms, Leocadie Gentils, White Swan, Hairy Wonder, and Louis Boehmer being those exhibited. Mr. H. Love, Sandown, Isle of Wight, was second with a much less even display. The next class was undoubtedly the chief feature of the meeting. This was for very valuable prizes with gold and other medals accompanying them. This competition was for twelve vases of specimen blooms of Japanese Chrysanthemums, distinct, each vase to contain five blooms of one variety. The vases were specially made by Messrs. James Green and Nephew, of Queen Victoria Street, E.C., who kindly lent them for the occasion. There were

some fifteen entries, reduced to nine actual competitors on the morning of the show. The vases were arranged equi-distant on long tables in St. Stephen's Hall, and formed quite a show in themselves. Ample space—about 2½ feet square—was allotted each vase, and arranged thus the display was a delightful change from the older method of showing handsome blooms on boards. Mr. McHattie led with grand blooms in almost every instance. Several were remarkable for their great size, and others for refinement and purity of colour, and they may be safely said to have represented the different types of Japanese blooms very well. The varieties worthy of notice were Mrs. White-Popham, Chas. Davis, Simplicity, Mrs. Mease, M. Chenon de Leche, Milano, Mrs. J. Lewis, Australie, and Mrs. Coombes. A very narrow margin divided the second prize lot, which was staged by Mr. W. H. Lees. In only one case could there be traced the least weakness, this being in the case of James Bidencope. These flowers were splendid examples of the variety, but the colour (purple-amaranth) is rather fleeting. Specially good in this exhibit were Mrs. Coombes, Oceana, Mrs. G. W. Palmer, G. J. Warren, Pride of Madford, Mutual Friend, Lady Ridgway, Mrs. Mease, Phœbus, and M. Chenon de Leche. A splendid lot of flowers secured third prize for Mr. J. Spink, Summit Road Nursery, Walthamstow, E., who had Marie Calvat, Mrs. White-Popham, Chas. Davis, and Mme. C. Desblanc in exceptionally good form. No less than eighteen exhibits were staged in the class for twelve Japanese blooms, distinct, and the margin dividing the different prize-winning exhibits was very narrow. Mr. Geo. Neville, gardener to Lord Chesham, Latimer, Chesham, Bucks, was placed first with a stand of good quality, even form, good colour, and beautiful finish. A grand lot of flowers also came from Mr. J. W. Roberts, gardener to Mr. G. J. Skilbeck, Clonard, Harrow Weald, who was placed second, this exhibitor having M. Chenon de Leche and M. Ed. André in magnificent condition. For Mr. Norman Davis's prizes given for blooms of Japanese varieties in different colours, comprising six classes, the competition was not so keen as was anticipated. For the best specimen white Japanese bloom, out of seven entries, Mr. G. Hagon, gardener to Mr. E. Arthur Lees, Fowley Park, Liphook, Hants, was first with a medium-sized bloom of Mme. Carnot. For the best yellow, Mr. James Brooks, gardener to Mr. W. J. Newman, Totteridge Park, Totteridge Common, Herts, was first with a splendid example of Phœbus. Mr. G. Hagon was again first for a pink or mauve bloom, showing a well-coloured Vivand Morel. In the crimson self, a medium bloom of E. Molyneux secured the first prize for Mr. J. Sandford, gardener to Mr. Wright Ingle, North Finchley, N. For a purple self, Mr. J. Brooks was first with a good bloom of Pride of Madford, and out of six competitors for a bronze-coloured Japanese, Mr. J. Sandford was again first with Mrs. G. W. Palmer. A pleasing change from the large, full flowers was that provided by a class for twelve vases single Chrysanthemums, each vase to contain six blooms. A silver cup offered by the Cannon's Restaurant, Ltd., was given as first prize in this class. There were only two competitors, and the leading exhibit came from Mr. G. W. Forbes, gardener to Mme. Nichols, Regent House, Surbiton. These blooms were very handsome, the best varieties being Admiral Sir Thos. Symonds, Annie Tweed, Earlswood Glory, Crown Jewel, Alphonso, Little Pet, Miss Annie Holden, Miss Mary Anderson, and Mrs. Walton. Mr. W. Aldridge, gardener to Mr. G. Lacey, Springfield House, Palmer's Green, N., was second with a weaker lot of flowers. For six blooms of Nellie Pockett, Hon. W. F. D. Smith, M. Louis Remy, Lord Ludlow, and two other Japanese sorts, for which a special prize was offered, Mr. H. Perkins was first with a nice bright lot. The premier Japanese bloom in the show was a charming example of the primrose-coloured Mrs. Mease, this coming from Mr. W. G. Prudden Clark, a Hitchin amateur.

ANEMONES, REFLEXED AND POMPONS, &c.

Of three competitors for twelve large-flowered reflexed blooms, Mr. T. Caryer, gardener to Mr. A. G. Meissner, Alderholme, Weybridge, was first, showing Dorothy Gibson, Cullingfordi, Cloth of Gold, Miss Florence Lunn, Phidias, King of Crimson and Golden Christine; second prize was awarded to Mr. J. Barrance, gardener to Mr. G. Taylor, Hadley Bourne, Barnet. The five exhibits in the class for twelve large-flowered Anemone blooms made a charming display, Mr. William King, gardener to Mr. James Warren, Waltham Cross, winning first prize with a nice even lot. Beautiful flowers of Gladys Spalding, Mrs. Judge Benedict, Mme. Robt. Owen, Descartes, Empress, M. Chas. Lebocqz, Mlle. Nat. Brun, Lady Margaret and Junon were neatly disposed. Second prize was awarded to Mr. A. Ives, gardener to Mr. E. C. Jukes, Hadley Lodge, Barnet, with pretty flowers, some, however, not fully developed. There were also five entries for twenty-four large-flowered Anemone blooms in which Japanese Anemones were included, Mr. W. King winning first prize with flowers of good quality. The most noteworthy were John Bunyan, Fabian de Mediana, W. W. Astor, Owen's Perfection, Mrs. Caterer, Sir Walter Raleigh, M. Dupanloup, Empress, Surprise and Mrs. Levin. Mr. A. Ives was second with much smaller blooms. Twelve Japanese Anemone blooms, distinct, made a pretty class, Mr. King again leading. Mr. Ives again secured second prize with a pretty lot of flowers, though distinctly smaller. There were four competitors for the prizes offered for twelve bunches of Anemone pompons, distinct, Mr. C. Brown, gardener to Mr. R. Henty, Langley House, Abbots Langley, securing premier honours with a charming lot of these delightful flowers. The best were Emily Rowbottom, Fred. Boyce, Antonius, Mme. Challenge, Bessie Flight, Miss Nightingale, Mr. Astie, Magenta King, Madame Sentir and Regulus. Mr. T. Parkins, gardener to Mr. Ward, Highgate, was second with a less even display. A class for twelve bunches pompons, distinct, three blooms in each bunch, is always pleasing. Mr. T. Caryer was first with an even lot of blooms of high quality and good colour, Pygmalion, Mrs. Holmes, William Westlake, Mlle. Elise Dordan, Prince of Orange, Perle des Beautés, La Vogue, Rubrum Perfectum and President being his best bunches. Mr. T. Parkins was second with an even lot of flowers, but duller in colour. Mr. G. W. Forbes was again to the fore with six varieties of singles in bunches or sprays of six blooms each, shown in jasper vases. This was a grand lot of even form, bright clear colour and large size. Mr. W. Aldridge was second with smaller blooms.

CUT BLOOMS—AMATEURS—DIVISION A.

For eighteen blooms Japanese, distinct, Mr. A. Page, gardener to Mr. A. L. Reynolds, Ravenscroft, North Finchley, was placed first with a nice fresh, even lot of blooms of good colour and medium size, Secrétaire Fierens and Mons. Demay Taillandier being noteworthy. Second prize was secured by Mr. Joseph Acock, gardener to Mrs. Bacon, Sutton, Surrey, with a very even lot of flowers, Mrs. G. W. Palmer being remarkable for colour. Eleven entries for twelve Japanese, distinct, found Mr. David Alger, Milton Bode, Down House, Bath Road, Reading, first with a nice fresh lot of blooms, Simplicity, Chas. Davis, Vivand Morel, and Mrs. White-Popham standing out distinctly. Mr. A. Page was placed second with a fine lot of flowers, Master H. Tucker and Mrs. G. W. Palmer being staged in rich colour. For six Japanese, distinct, out of ten competitors Mr. E. Ryman, gardener to Mr. O. Sapper, South Park, Reigate, led with flowers of good quality, President Nonin being his best. Mr. J. Denyer, gardener to Mr. Edwin Smith, Ingleside, Chatham, was second. The last-named was first for six Japanese, one variety, showing six very pretty and not over-large examples of Mrs. Mease. Mr. A. Page was second with medium blossoms of Australie. Mr.

Chas. E. Wilkins, Swanley, was first for twelve incurved, distinct, showing Lady Isabel, Chrysanthemum Bruant, and Chas. H. Curtis well. Mr. A. Hooney took second place, having rough flowers. Mr. Wilkins was first out of seven entrants for six incurved, distinct, Lady Isabel and Chas. H. Curtis being his best flowers. Second prize was won by Mr. C. H. Martens, gardener to Mrs. Langton, Raymead, Hendon, with smaller, neatly arranged and prettily finished blooms. For six incurved, one variety, Mr. A. Hooney was placed first with irregular blooms of Chas. H. Curtis, while Mr. Wilkins, with charming blooms of Globe d'Or of good form and broad petals, secured only second prize out of five exhibitors. The class for six bunches of pompons, distinct, was a pleasing variation, Mr. W. Aldridge leading with a very neat lot. Mr. A. Page was second, having a grand spray of Anemone pompon Fred Boyce.

DIVISION B.

For eighteen Japanese, distinct, Mr. Martin Silsbury, Providence, Isle of Wight, was a good first, with heavy blooms; Mrs. J. Bryant was his best flower. Of twelve entrants for twelve Japanese, distinct, Mr. A. R. Knight, Ashford, was first with a capital lot of large and even flowers, Mrs. Mease, M. Chenon de Leche, and Secrétaire Fierens standing out distinctly. A nice stand secured second prize for Mr. W. E. Reeve, Maybury Road, Woking. Eight competitors in the class for six Japanese, distinct, made a brave display. The first prize went to Mr. E. Brown, jun., Southampton, with nice even flowers, but distinctly behind the second prize stand in point of quality. The latter came from Mr. Reeve. Six Japanese, one variety, was a pleasing display, Mr. Henry Love beating four others with good flowers of Mrs. White-Popham. Twelve incurved blooms, distinct, were poorly represented, Mr. Jas. Falconer, Maldon, being first with neat and pretty blooms of D. B. Crane and Chas. H. Curtis. Mr. W. G. P. Clark staged rather rough flowers in a class for six incurved, distinct, and was awarded first prize. For six bunches of pompons, distinct, Mr. Clark was again first. Four classes were reserved for maiden growers, and in each case the competition was keen and the blooms generally of a high order of merit.

OPEN CLASSES—PLANTS.

Circular groups evidently have come to stay. On this occasion the groups were arranged on the ground floor, and made a pretty effect when viewed from the galleries. A conical method of arrangement is the practice adopted, and certainly might be improved upon. A break away from the present stiff method might with advantage be followed. First prize in the present instance went to Mr. J. Spink, Walthamstow, with a neatly arranged group, comprising blooms of high quality and good colour, all well developed. The plants were not too crowded, and a pleasing effect was got by the association of Crotons, Eulalias, Cocos Weddelliana, Ferns, &c., the group being surmounted by a noble Kentia. A good second was found in Mr. W. Howe, gardener to Sir Henry Tait, Bart., Park Hill, Streatham Common, S.W., who had a very handsome and highly-coloured group of Chrysanthemums and fine-foliaged plants, each well disposed. For six trained specimen plants there were three entries, Mr. J. Brooks, sen., gardener to Mr. Walter J. Reynolds, J.P., The Grove, Highgate, N., was a good first with neatly tied and freely-flowered examples of Miss Watson, Col. W. B. Smith, John Shrimpton, Phœbus, Maiden's Blush, and Mrs. Mease. Second honours were secured by Mr. F. E. Wright, gardener to Mr. J. Troup, Essex Lodge, Upper Clapton, a capital plant of Vivand Morel being his best. For four standard-trained specimens, the trio of exhibits made a grand array of colour. Mr. G. Whitbourne, gardener to Mr. S. Nichols, Walthamstow, was first with a pretty even lot of plants, well flowered. Cleopatra, Eva Knowles, W. Tricker and Sunflower represented a nice assort-

ment of colour. Mr. E. Easey, gardener to Mr. F. Bishop, 23, Highbury New Park, N., was second. In the class for four trained specimens, Mr. G. Whitbourne again led with very large, well flowered and neatly tied specimens of President Nonin, J. Shrimpton, Col. W. B. Smith and Vivian Morel. Second prize was awarded to Mr. Tom Stone, gardener to Mr. R. A. Cockburn, St. Neots, with freely-flowered plants. The only exhibitor of six standard-trained specimens was Mr. F. E. Wright, who showed fairly good plants of recognised specimen sorts. Six specimen-trained pompons were represented by two exhibits, that coming from Mr. T. Stone being a long way ahead of his rivals. They were large plants, freely flowered, neatly tied, and embraced a nice assortment of colours. Each of the *Cedo Nulli* family, white, lilac and golden, was represented. Fred Boyce, a pompon of *Anemone* form, but far too large; *Sour Melanie* and *Mme. Marthe* were the plants set up. Second prize was awarded to Mr. F. Gilks, gardener to Mr. A. Morris, Streatham, who had smaller, but irregular specimens. For a single specimen plant, Mr. J. Brooks, Sen., was first with a fine plant of *Chas. H. Curtis*, and Mr. Easey second with a rather poor plant of *Mme. Desblanc*.

BOUQUETS, EPERGNES, &c.

There was only one competitor in the class for a table of wreaths, bouquets, &c., illustrating the decorative value of the *Chrysanthemum*. First prize was awarded to Mr. L. H. Calcut, Fern Bank Nursery, Stoke Newington, for an exhibit showing considerable artistic skill and pleasingly disposed. Miss C. B. Cole, The Vineyard, Feltham, was first of five exhibitors for three *epergnes* of *Chrysanthemums*, &c., with appropriate foliage, in this case showing white and pink single-flowered blossoms. This was a pretty arrangement, though not effective under artificial light. Second prize was awarded to Mr. A. Merridew, who had the two outer *epergnes* lightly arranged with orange and bronze flowers, and the centre stand with pink and white singles. In the class for two vases of pompon and *Anemone* pompon *Chrysanthemums* arranged with any foliage, Mr. Mark Webster, gardener to Mr. E. J. Prestoo, Kelsey Park, Beckenham, was first. Second honours rested with Mr. W. C. Pagram, gardener to Mr. J. Courtenay, Weybridge, with a very pretty set of dwarf vases. For a vase of six blooms of one variety of Japanese, Mr. W. Howe led with a charming vase of the white *Lady Byron* and autumn foliage, followed by Mr. J. Denyer with a pleasing vase of *Mrs. H. Weeks*. For two hand bouquets or posies of *Chrysanthemums*, Mr. Webster was credited with leading honours, staging two beautiful examples, using singles in one case freely. A very poor pair gained second prize for Mr. E. Cowell, Lower Tooting, S.W. A hand-basket of *Chrysanthemums* for drawing-room table brought out a spirited competition, this class being open to ladies only. The judges placed *Mrs. Strugnell*, 213, Brixton Hill, S.W., first with a pretty combination of large yellow and white flowers, &c., with *Croton* and other foliage. A huge basket of large blossoms, pink and white, with a few small pompons and suitable foliage to relieve any heaviness, came from Miss Easterbrook, The Briars, Fawkham, Kent, who was an excellent second. No less than twelve exhibitors in the amateur division arranged a vase with six blooms of one variety only of Japanese flowers. The place of honour was taken by Mr. E. Jones, 51, Bower Street, Bedford, with handsome blossoms of *Mme. Carnot* and appropriate foliage. Mr. E. H. Chitty, Highgate, was second with pretty blooms of *Lady Hanham*. An exceedingly pretty class is that for a hand-basket of natural autumn foliage and berries, Miss Easterbrook securing leading honours with a superb basket, embracing a wonderful variety of berried plants and foliage.

FRUIT.

For three bunches white Grapes, Mr. W. R. Allen, gardener to Rt. Hon. Lord Hillingdon, Hillingdon Court, Uxbridge, was first, showing

Muscat of Alexandria in good form, Mr. W. Taylor following with rather smaller bunches. Eight exhibits of three bunches black Grapes made a fine display, Mr. W. Taylor leading with Black Alicante, bunches large and splendidly coloured. Mr. W. H. Lees was second with large, handsome bunches of *Mrs. Pince*. For three bunches Gros Colman Grapes, Mr. Chuck, gardener to Mr. Herbert Thelluson, Brodsworth Hall, Doncaster, was first with shapely bunches and large berries of good colour, Mr. W. Taylor following with smaller and less oven bunches. The ten collections of six dishes dessert Apples fit for table were remarkably fine. The first prize went to Mr. R. Chamberlain, gardener to Mr. F. M. Loneragan, Cressingham Park, Reading, this exhibitor staging Cox's Orange, Ribston Pippin, King of Pippins, Blenheim Orange, Gascoigne's Scarlet, and Fearn's Pippin. Second prize was won by Mr. Walter King, gardener to Mr. Jeremiah Colman, Gatton Park, Reigate, with a very handsome lot. For six dishes cooking Apples, a magnificent collection, with fruits of large size, good colour, firm, and of high quality, secured the first prize for Mr. W. T. Stowers, gardener to Mr. G. H. Dean, 70, Harold Road, Sittingbourne, Peasgood's Non-such, Mère de Ménage, Emperor Alexander, Lane's Prince Albert, Bramley's Seedling, and Glory of England (very fine) being his varieties. A good second was found in Mr. Wm. Camm, gardener to the Duchess of Cleveland, Battle Abbey, Sussex. Pears, too, were well shown, eight entries for six dishes dessert Pears fit for table being set up. Mr. Wm. Allen was first with excellent examples of *Doyenné du Comice*, *Emile d'Heyst*, *Marie Louise*, *General Tottleben*, *Marie Louise d'Uccle*, and *Beurré Diel*, Mr. T. Stowers being placed second for a very heavy lot of fruits.

VEGETABLES.

For a collection of vegetables, nine distinct kinds, for prizes offered by Messrs. Webb and Sons, there were six collections. Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts, was first with a beautifully arranged lot of vegetables of the highest quality. Mr. A. Basile, gardener to Rev. O. L. Powell, Woburn Park, Weybridge, was second for a nice lot of vegetables of good quality. For six dishes Potatoes, Mr. E. S. Wiles, gardener to Hon. Evelyn Hubbard, M.P., The Rookery, Down, Kent, was placed first with an even lot of tubers beautifully finished. There were other classes of a similar character, of which space will not permit details being given. Special notice must be given of the thirteen classes, embracing all the most popular vegetables, for prizes offered by Mr. Robt. Sydenham, Birmingham. In each class no less than five prizes were offered, and in each class the competitors averaged ten to eleven. The large character of the display can therefore be gauged to some extent. In addition to the money prizes a handsome challenge cup, value fifteen guineas, is held by the winner of the greatest number of points in the thirteen classes. Mr. Beckett was an easy first with forty-nine points, Mr. Empson, second, with thirty-three points, and Mr. Brown, third, with twenty-two points.

MISCELLANEOUS EXHIBITS.

At the north-western end of the building, Mr. Norman Davis, Framfield, Sussex, and Mr. H. J. Jones, Rycroft Nursery, Lewisham, S.E., each occupied a platform 20 feet by 10 feet, arranging in oriental vases, trumpet vases, and numerous other receptacles flowers of a representative character. In the case of the former, huge yet handsome blossoms of *Mme. Carnot* and its sports, Western King, and other leading sorts were artistically displayed, the blooms in Mr. Davis' exhibit being of exceptionally high quality. Mr. Jones' exhibit towered somewhat above its neighbour, and artistic skill in the disposition of the blooms, associated with autumnal and other foliage, made these two exhibits, which were to all appearance one, the leading feature of the show. New varieties were pleasingly

interspersed among the Ferns and other plants. A large gold medal was awarded to each exhibitor. A similar award was made to Messrs. H. Cannell and Sons, Swanley, for a very long table, on one side of which were rows of large, handsome *Chrysanthemum* blooms of new sorts, the other side containing gorgeous bunches, some seventy-two in all, of the newest and best of the popular zonal *Pelargoniums*. At either end of the table were arranged groups of richly coloured and striking flowers of the most noteworthy *Cannas*. Mr. John Green, Norfolk Nurseries, Dereham, also had a large table of cut *Chrysanthemums* arranged in triangular spaces (silver medal). Small gold medals were awarded to Messrs. B. S. Williams and Son, Victoria Nursery, Upper Holloway, and Messrs. William Cutbush and Son, Highgate and Barnet Nurseries. The former had a grand table of *Gloire de Lorraine Begonias*, *Orchids* in variety and *Heaths*. The Highgate firm had an immense table of *Chrysanthemum* blooms, *Ericas* in variety, *Roman Hyacinths*, *Bouvardias*, *Carnations*, backed by graceful *Bamboos*. Messrs. John Laing and Son, Forest Hill, decorated the north-western fountain, using *Chrysanthemums* and a variety of fine-foliaged plants and hardy shrubs for the purpose. The *Ichthemio Guano Company*, Ipswich, received a silver medal for their stand decorated with pretty plants of freely-flowered *Chrysanthemums* and a splendid array of black and white Grapes. Mr. T. S. Ware, Ltd., Tottenham, and Mr. Robert Owen, Maidenhead, both exhibited cut blooms of *Chrysanthemums* in variety, and in the case of the latter several promising seedlings were noted. Messrs. Peed and Son arranged a pretty conical group of *Chrysanthemums*. Messrs. Isaac House and Son, Westbury-on-Trym, had a small table of several of the best sweet-scented Violets. Mr. J. Agate, Havant, had a dozen handsome flowers of *Florence Molyneux*; and Mr. Forbes, Hawick, N.B., his new white *Begonia*, *Caledonia*.

A meeting of the floral committee was held at the Royal Aquarium, Westminster, on Monday last, 13th inst., Mr. Thomas Bevan occupying the chair. Several novelties were staged, but in one instance only was a first class certificate awarded. Commendations, however, were made in several cases. A first-class certificate was awarded to

CHRYSANTHEMUM RALPH HATTON.—A large silvery mauve incurved flower, inside of florets of a rosy-mauve colour. From Mr. H. Weeks, The Gardens, Thrumpton Hall, Derby.

The following kinds were highly commended:—

GENERAL SYMONDS, shown by Mr. Weeks, is a large incurved flower of a pale golden-buff colour, inside of petals suffused crimson.

VICAR OF LEATHERHEAD, from Mr. H. Jones, is a Japanese flower of a lovely golden-yellow colour, deepening in the centre, the florets long and of medium width, slightly curled. This is said to be a cross between *Lady E. Saunders* and *Edith Tabor*.

GEORGE TOWERS is a Japanese flower of a bright rosy-purple, with silvery reverse, and commended by the committee for its colour. This was sent by Mr. Weeks.

MRS. F. B. GARRARD is also a Japanese flower of medium size, with rather broad florets which lack substance. The colour is a pleasing primrose, deepening to yellow in the centre. This came from Mr. T. Priest, Cherry Tree Lane, Iver Moor, Bucks.

MRS. GROGAN is an incurved variety of a rose-pink colour, with broad petals. Also from Mr. Priest.

LITTLE PET is a small-flowered single of the truest type, colour a pleasing rose-pink. A freely-flowered plant was exhibited, and this appeared to be about 3 feet 6 inches in height. This came from Mr. G. W. Forbes, The Gardens, Regent House, Surbiton. The committee wished to see again Capt. A. d'Albert, a pretty flesh-tinted incurved, with rather narrow pointed florets; *Flying Fox*, a rich golden-yellow incurved, a cross between *Océana* and *Phœbus*; and *Arthur King*,

a large, though somewhat rough, incurved white, tinted flesh.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 21, in the Drill Hall, James Street, Westminster, 1—4 p.m. A lecture on "Fruit Growing in South Wales" will be given by Mr. J. Basham, F.R.H.S., at 3 o'clock.

— Examination in Horticulture, 1900.—The day suggested for the examination, April 17, 1900, being Easter Tuesday and highly inconvenient to many, has been altered to Wednesday, April 25.—W. WILKS, Sec.

PUBLIC GARDENS.

CHRYSANTHEMUMS IN BATTERSEA PARK.

This collection of Chrysanthemums is well worth a visit by those who are interested in the metropolitan displays. The plants are nicely arranged and the flowers are all fully out, and in addition to the usual large sloping bank of bloom there are many freely flowered plants of Japanese and pompons, such as Margot, Source d'Or, l'île des Plaisirs, Sœur Melanie, Rosinante, Aigle d'Or, La Vogue, and others which are used to brighten up the sides and lower end of the roof.

Japanese are here in great force. Souvenir de Petite Amie and Mme. Gustave Henry are useful whites. N.C.S. Jubilee is a fine deep bloom of a pretty shade of silvery pink. M. Chenon de Leche is a well-known favourite everywhere, while Australian Gold, in the pale yellows, is of good size and of a soft, clear shade. The curious green Mme. Ed. Roger seems to maintain its peculiarity of colour wherever seen, and always arouses interest. President Nonin is big and solid, and for a pretty thing we think Mme. A. Rousseau, rosy pink, will require some beating. Rose Wynne, Good Gracious (very fine), John Shrimpton, William Seward, and La Triomphante form a happy blending of colour. Mme. de Sevin, purple, and Mrs. S. C. Probyn, pale silvery pink, are both good. Mrs. E. S. Trafford, Australie, large, but always dull; Hamlet, a bright salmon-red; Eda Prass, W. Tricker, pretty pink; and the strikingly effective Gloire du Rocher need no further mention. Purples are represented by Alberic Lunden and the old Edouard Andiguier. Good standard whites comprise Lady Byron, Mrs. H. Weeks, Florence Davis, Florence Piercy, Lady Selborne, Niveum, and the like, while yellows in all their variety of tint are met with in J. H. Runciman, a good deep golden, globular flower, Gloriosum, Modesto, Sunflower, Edith Tabor, &c.

The incurved are grown and do fairly well, considering they are not quite so likely to please the average visitor. Queens, Empresses, and Princesses are, of course, among the best, although Lord Wolseley, C. H. Curtis, Jeanne d'Arc, Mrs. W. Shipman, Globe d'Or, Prince of Wales, Baron Hirsch, the Beverleys, and a few others similar run them rather close. A few Anemones, of which we might mention Descartes, rich deep wine colour and large in size; John Bunyan, M. C. Lebocqz, and Delaware, complete the list, except just a mention of that pretty little gem, Elise Dordan, a pompon that most usefully helps to lighten a big group of the type seen at these public shows in the parks. We understand there are about 2200 plants in the collection, and varieties to the number of something like 250.

Oasis in Chancery Lane.—The narrow piece of ground by the side of the new Record Office in Chancery Lane, on part of which the old Rolls Chapel formerly stood, has just been turfed and planted with shrubs and flowers.

Open spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, 33,

Lancaster Gate, W., the Earl of Meath, chairman, presiding, it was stated that the association had commenced the laying-out of the churchyard of St. Mary's, Plaistow, and that the faculty having been granted for Christ Church, Blackfriars, this ground would shortly be taken in hand. A letter was read from the New River Company declining to allow the association to deal with the enclosure in Percy Circus as a public garden, but stating that steps were being taken to rescue the ground from its neglected condition. It was agreed to support schemes for the acquisition of Albert Square, E., as a public garden, for the extension of Brockwell Park, and for the conversion of the Latchmere Allotments, Battersea, into a public recreation ground. It was announced that the Acton District Council had accepted the association's offer of seats for a site near the parish church, and it was decided to offer to plant trees in various thoroughfares in Paddington and elsewhere, and in St. John's Churchyard, Westminster.

TEACHING GARDENING TO WOMEN.

THERE is a very long article in the *Nineteenth Century*, with much pretence of learning, upon horticulture as a profession for ladies. It is, however, but an advertisement in praise of horticultural colleges to which so much public attention has been drawn of late years. These colleges appear to be something like the agricultural colleges to which a farmer, who finds it hard to make £100 a year clear profit, has a chance of sending his son at a cost to him of £200 a year! These things are, we fear, got up in the interests of the staff rather than of the students. Towards the end of the article we find contra dictory matter culminating as follows:—

The practical result of all this is that out of 100 women who begin to train as women gardeners, thirty-eight only have held situations, and some of these have since abandoned the work. Out of the thirty-eight who have accepted employment, twenty-four only had completed their studies, and eighteen only—two of whom have since given up gardening as a profession—have taken the college diploma. Therefore, so far as the women's branch of the horticultural college at Swanley is concerned, only sixteen qualified gardeners are at work out of the hundred women who have attempted the training.

The weak point of such institutions is that they offer teaching at too high a price, while the poorest boy willing to work can get better teaching for nothing in any good nursery or large garden. In such his chances of gaining knowledge are greater than at one of these colleges. The consequence is that while the youth in the nursery or good garden is, at no expense, learning his work, the student at the college is paying heavy fees for what is little more than theoretical instruction, and when at the end of a given period the one has a knowledge of his trade at his fingers' ends, the other can only produce a diploma.

The writer gives the most eloquent testimonial when she couples the term "educated gardeners" with Swanley Horticultural College, of which she was lately the secretary, and says that it "has not, I believe, added half-a-dozen to their numbers since its first establishment, some ten years ago."

Landscape architects.—The good old name of landscape gardener, which is the best possible term, is not good enough for our foreign friends, who wriggle out of it in various ways at some cost. The French invented the term "landscape architect," which the Americans have taken from them, and air very much in spite of the absolute incompatibility of the two things. Once in talking with Edouard André about this subject he said that it arose from the dislike in France of

any professional man to be called a gardener in any shape. The most amusing thing, however, in the way of such compound titles that has lately come to us is a letter from an American—a very interesting letter, too—which is headed as set out below. So that the same paradoxical idea is spreading into other fields, and those who so dub themselves are not even afraid of the ridiculous.

C. H. PAYNE, C.E.,

Poultry Architect,

Investigator and Writer of Popular Articles
on

Up-to-date Poultry Culture.

OBITUARY.

MR. J. SHRIMPTON.

THE Chrysanthemum community is deploring the recent death of Mr. John Shrimpton, for fifteen years past the confidential acting foreman and raiser of seedling Chrysanthemums under Mr. William Seward, The Firs, Hanwell. He died from cancer, after a prolonged and painful illness, at the age of fifty-nine years. Born at Norwood, Middlesex, in 1840, he early in life served under Mr. Lamb, then gardener to Miss Thackwaite, of Norwood Green, at that time a leading and successful cultivator of Pelargoniums, Cinerarias, &c. On the death of Mr. Lamb he went to Osterley Park Gardens under Mr. Welch, head gardener to the Dowager Countess of Jersey, and on Mr. Welch leaving he succeeded to his position and served under the Countess, and also under the Duchess of Cleveland, in all a period of twenty-one years. He had been with Mr. Seward for fifteen years, and during that time raised from seed some very fine Chrysanthemums of the Japanese type, such as William Seward and John Shrimpton, which were the earliest to be put into commerce. Other fine varieties were John Seward, Dorothy Seward, Mrs. J. Shrimpton, John Neville, Joseph Brooks, Mrs. Hermann Klose, &c., and in addition an incurved variety named Hanwell Glory. Most of the foregoing were awarded certificates of merit.

The weather in West Herts.—Since the month began all the days have been warm, and there have been but three cold nights. On the coldest night the exposed thermometer only showed 4° of frost. At one foot deep the ground is now at about a seasonable temperature, but at 2 feet deep is still 2° warmer than the average. No rain has fallen since the 10th, but during the previous eleven days 3½ inches of rain were deposited—or three quarters of an inch more than the average quantity for the whole month.—E. M., *Berkhamsted*.

Antholyza æthiopica vittigera.—Allow me to correct the statement with regard to the *Antholyza æthiopica vittigera* which I found at Port Alfred (not Port Elizabeth), and brought back to Mr. Bennett-Poë.—E. L. RILEY.

Planting a garden (J. H. S.).—Judging a garden one has never seen from a piece of paper is very difficult, as the best result can only be got by someone who has seen or knows the place, soil, conditions of country, and the climate. What is best to be done must be bound up with your own tastes and wishes. Generally the best results with hardy plants are got in two ways—by selecting only the best plants and good varieties of them, and grouping them in free and picturesque ways.

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THE GARDEN.

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INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—		Chrysanthemum Hairy	Hedychium coronarium .. 418	Odontoglossum Schleperli-	Dahlias and Marigolds in the
Apple exhibitions 410	Wonder 415	Jasmine, the Night-flower-	ing 417	anum citrinum 422	open 427
Apple trees, thinning 410	Chrysanthemum H. J.	Plants, berried, at Chryean-	Lilium auratum, imported .. 418	Paphinia grandis 423	Epiphyllum truncatum, a
Apples at Ottawa 410	Jones 417	thum shows 418	Phalænopsis Esmeralda .. 423	Rodriguezia planifolia .. 423	fine 427
Borders, flat <i>versus</i> sloping	Chrysanthemum Hanwell	Rivina humilis 418	Sobralia Lindenii 423		Eschscholtzia crocea .. 427
409	Glory 417	Ruellia macrantha 418			Pear Bonne de Malines .. 427
Peaches in Sussex 409	Chrysanthemum Mrs. Mease			Ferns:—	Primrose, the blue .. 428
Pear Alexandre Lambre .. 409	Chrysanthemum Sœur Me-			Fern spores 421	Sternbergia lutea 428
Pear Beurre Superfin, varia-	lania 417			Ferne, hardy—winter treat-	Trapezium tuberosum .. 428
tion in colour of 410	Chrysanthemums at Chelsea			ment 424	Violet Princess of Wales .. 427
Pear Emile d'Heyst 409	Chrysanthemums at Fram-			Ferns, sunlight for .. 424	
Pear Seckle 409	field 414				Public Gardens:—
Plum, the Sand 410	Chrysanthemums at Lewis-				Lyons, Park de la Tete d'Or
Root pruning, good effects of	ham 416				Worceley, a recreation ground
411	Chrysanthemums at the				at 428
Strawberry beds 409	Aquarium 414				
	Chrysanthemums, hairy .. 416				Miscellaneous:—
Kitchen:—	Chrysanthemums, M. Nonin's				Arundinaria nobilis at Pen-
Broccoli, heeling in 411	seedling 414				jerriek 410
Cabbage, pickling 412	Chrysanthemums, notes on				Cordylines at Penjerriek .. 424
Carrot Early Gem 411	varieties of 415				Dacrydium Franklini at Pen-
Soils, heavy, deep stirring of	Chrysanthemums, pompon				jerriek 418
411	Chrysanthemums, seedling,				Dicksonia antarctica in the
Tomatoes, French 411	new French 414				open air at Penjerriek .. 418
Tomatoes, notes on 412	Chrysanthemums, single .. 416				October in S. Devon .. 420
Turnip Green Ring 411					Penjerriek 413
					Penjerriek, in the garden at .. 415
Chrysanthemums:—					Phyllotachys nigra at Pen-
Chrysanthemum Chrysen-					jerriek 422
themiste Bruant 417					Synaphyandra Hofmanni .. 418
Chrysanthemum Clinton					Weather, the, in W. Herts .. 428
Chalfont 417					
Chrysanthemum Firefly .. 417					
Chrysanthemum Golden					
Sheaf 415					

ORCHARD AND FRUIT GARDEN.

FLAT *VERSUS* SLOPING BORDERS.

IN most gardens fruit tree borders at the foot of walls are generally of such a width, that, independent of the growing of fruit trees, a good portion of the same is available for the cultivation of vegetables and the growing of Strawberries, &c. These borders, in order that they may benefit to the full from the warmth of the sun's rays, are invariably made so that they slope from the foot of the wall to the edge of the footpath, which latter generally forms the boundary line. Sometimes they have a very gentle fall, but often slope somewhat sharply, for the sharper the angle, the greater the amount of heat absorbed. This, of course, has its advantages, but it must be remembered that the sharper the slope, the drier does the soil get, and though in an ordinary season this is not a matter of any great moment, in a dry time it is a very serious matter, and occasions a great deal of extra labour in making good the loss. A border having a nearly level surface, or one which slopes very gently, does not benefit to the same extent, perhaps, in the absorption of sun-heat, but as a set-off against this the soil does not dry so quickly, consequently the roots of the fruit trees do not suffer to anything like the same degree in a dry season. During the past three seasons those having sloping borders know to their cost what an amount of labour has been consumed in supplying the roots of fruit trees growing in them with the requisite amount of water to keep them in a healthy growing condition. Where a supply of water is at hand and hydrants are placed at convenient spots about the garden, matters under such circumstances are much simplified, but when the water has either to be hauled or carried long distances it is quite a different matter, and where labour is none too plentiful the trees are then often left to their fate. These sloping borders are, of course, useful for the raising and growing of early crops of vegetables, but for fruit trees they are, unless in cold or low-lying, damp localities, very undesirable. Having had a few of such borders to deal with, I know full well what a

dry season means, and although more advantageously situated as regards water supply than many, it runs away with a great deal of extra labour to keep the soil about the roots of the trees in a moist condition. I have been altering some borders of late years by making the portion occupied by the roots of the fruit trees quite so, or nearly flat, so that water, whether applied artificially or otherwise, at once sinks in and affords benefit where it is most needed. The worst case of all I am dealing with this season. This was raised to such a height that there was a difference of 18 inches between the level at the foot of the wall and that at the edge of the walk. The supplying of the trees (Pears) growing against this wall with water during the past three seasons has given rise to such a great amount of extra labour, that I at last decided to lift the trees and plant them at a lower level. The surface of the border was lowered, and it is now nearly flat, and although the alteration has occasioned a great deal of labour, I am sure there will be a great gain from a labour point of view in the future, while the trees themselves will greatly benefit by the alteration.

A. W.

Pear Seckle.—Those who have a demand for small Pears with excellent flavour ought to grow this sort, for it is one of the surest croppers and of most lovely flavour. I find it succeeds best as a bush or low standard, and if the fruit, that usually sets in bunches of from three to five, is thinned out to one, it will attain a fair size. With me it is usually at its best about the end of October. The tree is of excellent habit. The wood should be thinned out freely, as the terminal buds are mostly fruit-buds.—J. G., Gosport.

Pear Emile d'Heyst.—This Pear has done well this season, but unfortunately the fruits lasted but a short time in sound condition. This is a defect from which several other sorts suffer, and more particularly this year than in others, owing no doubt to the great heat of the past summer having hastened maturity. Emile d'Heyst is a good cropper on the Quince, and the fruits are large and very nicely coloured. I have seen it stated that it equals Marie Louise in quality, but such is not my experience. All the same it is a good Pear, and where Marie Louise is not a success, no doubt it would form a good substi-

tute. Marie Louise still occupies the foremost position here for quality and flavour, two others nearly approaching it being Doyenné du Comice and Thompson's.—A. W.

Pear Alexandre Lambre.—Although not by any means a new Pear, it having been raised and subsequently fruited by Van Mons in 1844, it is one well worthy of cultivation. My one tree of it, which is on the Quince, has never quite failed since it came into bearing, and it invariably bears well. It is a very hardy variety, and the fruits, if not large, are sufficiently so for all ordinary purposes; in fact, many persons prefer Pears of this size to larger ones, such as Pitmaston Duchess and Doyenné du Comice. With me the flavour is excellent and the fruits remain in good condition longer than many of the November Pears do, and I find it extremely useful at this time of the year. It is a free grower and forms either an open pyramid or bush, the habit of growth perhaps lending itself more readily to the former method of training than to the latter.—A. W.

Strawberry beds.—The present outlook for next year's Strawberry crop is by no means rosy in this locality, for with very mild weather and continuous downpours of rain the plants are now making growth freely. If it is really necessary that they should make their flowering crowns and then go to rest after the way that we have always treated our pot plants, then I think that if they turn out well after the present experience we have taken a good deal of unnecessary trouble with our pot plants, for from midsummer to Michaelmas the old Strawberry plants in this locality looked far more dead than alive, the old foliage lying flat on the soil. It was not until October was well advanced that enough rain fell to revive them, but now in November they are making growth that ought to have been made three months ago. I shall watch the result with much interest. The crop was as near as possible a failure this year, and the conditions that led to it are even worse this season—at least, I find it so.—J. G., Gosport.

Peaches in Sussex.—Some few weeks ago I was visiting in Sussex, and although I had not the privilege of seeing the early and midseason crops of Peaches outdoors there, I saw the late ones, and can therefore accept all that your correspondent has to say as to the Peach season having been such a very successful one in the county of Sussex. I was assured by one grower that the crop in his particular case had been a

heavy one from the beginning to the end of the season, which statement agrees with all the writer of the note in question has to say on the subject. In spite of the severe visitation of frost during the time the trees were in bloom they escaped serious damage in many places as well as in Sussex, and a friend of mine who at the time feared he had lost the whole of the crop was agreeably surprised to find afterwards that he not only had quite sufficient fruits, but a good few to spare when they came to swell off. I saw in a Sussex garden one of the finest crops of Salway Peach I have seen anywhere. The tree was carrying a full crop, and the fruits were very large for the variety. I had not an opportunity of putting flavour to the test, but was told that it was generally good. The chalky soil of the border seemed to suit Peaches, judging by the growth the trees had made and their general appearance. This variety is the most unsatisfactory one I have to deal with, and I cannot get it to crop with any degree of regularity. I have but one tree which, when it fails to set a crop, makes far too strong growth. This season I am having the roots lifted and shortened, which will, I hope, induce greater fruitfulness in the future. —S. E. P.

VARIATION IN COLOUR OF BEURRE SUPERFIN PEAR.

As this Pear succeeds remarkably well here and being a great favourite withal, I grow a good many trees of it both in the form of cordons and bushes. Both forms of tree bear well, and the fruits with one exception are of superior quality, but it is respecting the wide diversity there is in the colour of the fruits that I am prompted to write this note. This variation is so pronounced in some cases that only those thoroughly acquainted with this variety would recognise them as being one and the same Pear. The exception mentioned above has been brought about by double grafting. The fruits produced by some of the cordon trees are clear skinned, or at the most having but a few flakes of light brown-russet on the surface, and they invariably grow to a very large size. Some cordons, on the other hand, carry fruits whose skins are entirely covered with a rich dark brown russet, and these never attain such large size as the preceding, though equal in point of flavour. The bushes, too, produce fruit of this character, but hardly so large. The shape of the fruit in all instances is identical, the trees are all on the Quince, and yet there is this wide difference in the colour of the skins. The same thing occurs every year. The composition of the borders in which the trees are growing is the same; they all receive the same kind of manure, and are therefore cultivated under the same conditions. It is very puzzling, and I must admit that I am quite at a loss to account for this variation in colour. Happily, it makes not the slightest difference as regards the flavour and quality of the fruit, but it is a difficult matter to convince some people that they are not two distinct sorts. Regarding the double-grafted tree mentioned above, *Beurre Superfin* was in this case worked on *Knight's Monarch*, the original stock being the Quince. When this began to bear it was noticed that the fruits neither turned yellow nor brown, but assumed the greenish yellow tint of *Knight's Monarch*. The shape is that of *B. Superfin* in every particular, but the flesh is of a deeper yellow and the flavour midway, or partaking of both varieties. This is, of course, a very different case to the above, where nothing can be adduced to account for the difference in the colour. If all the cordon trees produced clear skinned fruits and the bushes the reverse one could have accounted for it by supposing that the shelter afforded by the wall and the extra amount of warmth experienced by the fruit would cause the skins to be of a finer texture. Under the circumstances I am, as previously mentioned, unable to give an explanation, and it would be interesting to know whether any other grower has noticed

such a wide distinction in the colour of the fruits of this fine Pear.

It may be interesting to some to know that the finest fruits of *Beurre Superfin* I ever had were from a tree worked on the *White Thorn* as a stock. The fruits were of a beautiful clear yellow in colour when ripe, with just a slight suffusion of red on the side facing the sun, and the flavour was delicious. Unfortunately, the stock grew so slowly that the scion began at last to lack nourishment and refused to grow.

Stoke Edith, Hereford.

A. WARD.

THE SAND PLUM.

THIS interesting wild Plum of the south-western sand plains has been described and illustrated in these columns, and some endeavour made to gauge its economic status. Mr. W. L. Hall, who has recently been studying the species in Kansas on the ground where it is most abundant, speaks very hopefully of it. He distinguishes and describes three types as follows:—

1. A common type growing in almost pure sand, 4 feet to 10 feet above the water level. Bushes in scattered thickets, 2 feet to 4 feet high, branching and bearing fruit from the ground up. Leaves small, 1 inch to 2 inches long, never open to a plane surface, thick, shining, finely serrate. Fruit three-fourths to one and one-eighth inches in diameter, globose. Colour bright red clouded over lemon yellow ground. Flesh yellowish, tender, juicy, sweet, somewhat fibrous, and adhering firmly to stone. Ripe in Southern Kansas the first week in July.

2. A small group of bushes growing in a very large thicket on the Arkansas River. Bushes extremely dwarf, but tree-like, 3 feet to 4 feet high. Branches unusually stout, growing laterally more than upright. Leaves larger than on common types, dark, shining green. Fruit large, one inch to one and one-fourth inches in diameter, rounded or flattened. Colour dull red, but somewhat hidden by the heavy bloom. Flavour excellent. Ripe in latter part of July. A variety surpassing many cultivated sorts.

3. A small clump of bushes found near the variety last described. Bushes small, 2 feet to 3 feet high. Foliage scant, leaves small. Fruit fine in appearance, one inch to one and one-fourth inches in diameter, roundish, bluish pink colour, with delicate bloom. Skin thin. Flesh juicy, melting, rich. Flavour sweet and good. The most delicious sand Plum that has yet come under my observation, and worthy of place in any orchard.

Just what relation these types bear to the species type, or what botanical or horticultural importance they may have, does not seem to be determined, but it is some satisfaction to note that an active interest is being taken in another native fruit. There are great possibilities yet unrealised in our native fruits.—*Country Gentleman*.

Apples at Ottawa.—There are 653 varieties of Apples under test at the Canadian Experimental Farms at Ottawa. Of these about 160 are Russian. The following standard varieties are said to be thriving best: *Baxter*, *Ben Davis*, *Canada Baldwin*, *Delaware Red Winter*, *Duchess*, *Duke of Connaught*, *Gano*, *Gideon*, *Haas*, *Lawyer*, *Longfield*, *Malinda*, *McIntosh Red*, *McMahan White*, *Missouri Pippin*, *North Star*, *Patten's Duchess*, *Patten's Greening*, *Pewaukee*, *Plumb's Cider*, *Red Astrachan*, *St. Lawrence*, *Salome*, *Scott's Winter*, *Stark*, *Swayzie Pomme Grise*, *Tetofsky*, *Wealthy*, *Winter Bough*, *Winter St. Lawrence*, *Wolf River*, *Yellow Transparent*. This is a good long list. It offers chance enough for anyone to choose. It may be noticed that not more than seven of these are Russian varieties, or less than the proportion of Russian varieties in the whole orchard. This would indicate that there is some chance of salvation for Apple growing in cold climates, aside from the Russian varieties. The list, considered at its face value, is a distinct encouragement to northern Apple growers.

Thinning Apple trees.—Writers on fruit culture are continually advising that orchard trees and others should be well thinned, yet specimens where the pruning knife has done its

work properly are not often met with. At Bramley Park, Surrey, I noted recently an Apple plantation which has been well cared for in this respect, and it formed a splendid object-lesson in its results. Fine well-shapen, clean specimens were hanging like the proverbial ropes of Onions; not one sort, but all alike. The *Ribston Pippin* appeared equally free to fruit, as did *Lord Suffield* and *Blenheim Orange*. The trees are mostly standards, the oldest being about twelve years, and all were planted by the present gardener, Mr. H. Paddon. A not over-deep natural soil has been improved by having a hole some 2 yards square duly prepared for each tree. This is occasionally replenished by additions in the way of top-dressing, and grass or weeds are kept from these patches, which are mulched with manure in summer. In a very dry season like the last copious supplies of water have been applied to the roots to help in finishing such an unusual crop. These items, however, important as they undoubtedly are, have not done so much, to my thinking, as intelligent thinning of the branches of the trees. Looked at casually, many of the branches seemed a yard apart. They were several yards long on the older trees, and studded with fruiting spurs from base to apex. Nearly all the growth indeed goes to making fresh spurs instead of lengthy leaf-shoots, the trees being so well in hand that little summer pruning is required. Superfluous growth has been prevented in the younger stages of the trees by timely root pruning, and now the crops of fruit that are gathered each season also assist in this direction. All the well-known Apples of merit are represented, and they provide a constant supply from July to well on in the following spring.—H. S.

APPLE EXHIBITIONS.

SINCE the holding of the great Apple congress at Chiswick we have had fine displays of Apples as public exhibits, not only at the Crystal Palace and the Drill Hall, but also all over the country, but with none of these has there been any effort made to render them instructive, as was done at the congress. Since that event, whilst we have materially increased Apple varieties, we seem also to have so far advanced in culture, that for the past few years the fruits have been publicly presented in form and in quantity that seem to have excelled all previous displays. But whilst the superb collections seen from time to time evidence the existence of these grand fruits, they tell nothing as to how produced. If a great display of from 100 to 150 dishes of varieties be shown by a nurseryman, the common assumption is that all have been produced on the usual two or three-year-old trees, just ordinary nursery trees. That may be a correct deduction, or it may not, but certainly the age as well as form of tree should be clearly indicated, because to all intending fruit growers it is matter of the highest importance they should know what description of tree may seem most suited for their purposes. This matter becomes of far greater importance when fruits from any private garden are exhibited, because these are the products of established or garden trees, and not of those of the nursery grown only for sale. Apples in gardens are grown under so many diverse conditions; some are grown in pots and partially under glass; some are grown on walls, some on espaliers or cordons, some on bush trees, some on standards, and in the case of the latter, not a few on grass in orchards. Then there is the question of stock, whether *Crab* or *Paradise*. But when a large collection from any private source is exhibited, not a word is said to indicate how these fruits were produced. Would it be too much to suggest to the council of the Royal Horticultural Society that henceforth no medal shall be

awarded to any collection of either Apples or Pears unless the fruits are grouped according to the nature or form of the trees that produced them? How much better would it be to place a large card against each section indicating whether grown on bush, standard, espalier, cordon, wall or other trees, and what the stock, because this would be information which the public would greedily seize upon and utilise. Even some information as to the nature of the soil in the nursery or garden generally, and situation, whether high or low, exposed or sheltered, would be valuable. It is a matter of common notice and comment that our fruit nurserymen invariably illustrate their catalogues with portraits of young or nursery trees. Now these have no interest for the private grower, because they do not represent established trees. Were these illustrations photographic portraits of trees several years planted, such as had become established and had been under ordinary garden culture for some time, how much more of value would they have. Were the collections of fruit to which reference has been made ornamented by good pictures of some of the trees from which the fruits have been gathered, how interesting would these be also. Perhaps it may be possible to offer good prizes for collections from private gardens of from forty to fifty dishes, distinct varieties, exhibited in this sectional and very educational way. I have seen ordinary collections of both Apples and Pearsshown timeaftertime, one being but the replica of the other. They are fine, even beautiful, but still show such monotonous repetition. Real originality in arrangement, especially with an eye to either novelty of presentment or of educational value, seems beyond the ken of the ordinary exhibitor. If there is one question more than any other in relation to Apple culture that is important, it is what description of stock and tree is best suited for ordinary culture to enable fine clean Apples to be produced most profitably and in the greatest abundance. That is a something worth taking a little trouble to elucidate. It is a problem that is of the first importance to solve. A. D.

The good effects of root-pruning.—Practical fruit growers will, I think, agree with all that Mr. Prinsep has written (p. 369) as to the value of root-pruning fruit trees which fail to bear through making a too luxuriant growth. I am a great advocate of the system, and never fail to practise it directly I find a tree—whether young or otherwise—begins to make strong growth and fails to set fruit-buds. Root pruning is not by any means new, but it is not resorted to so generally as it should be as a means of inducing fertility. My first experience in root-pruning was gained about thirty years ago, and the gardener under whom I then served, and who was at that time a noted fruit grower, used always, when necessary, to practise it with most excellent results. The same benefits invariably accrue from its adoption here; in fact, on a fertile soil such as I have to deal with it is imperative to root-prune young trees planted round the vegetable quarters to keep them within bounds and to prevent them unduly shading the ground. Once the strong growth is checked and the trees become fruitful it is not often they give further trouble, and the fact of their bearing fruit of course then supplies the needful check afterwards. There is hardly a season passes in which I do not see this simple expedient neglected in different parts of the country, and yet when the advice is given that root-pruning could rectify matters, it is not acted upon as often as it might be. At the present time I am root-pruning some young cordon Plums planted three seasons ago. This has become necessary on account of their making far too strong growth, and the severing

of the strong roots and the laying out of the fibrous ones afresh will, I have not the slightest doubt, bring about the desired result. The soil is now in splendid condition for carrying out this kind of work, and the sooner it is done the better, as the wounded portions of the roots then have the chance to heal over.—A. W., *Stoke Edith*.

KITCHEN GARDEN.

DEEP STIRRING OF HEAVY SOILS.

OLD customs die hard and old ideas are very difficult to get rid of. The idea that it is harmful to dig heavy soils deeply is one of the latter, and owing to this mistaken notion, there are scores of gardens that might be greatly improved simply by deeper culture. It is a fact that a great deal of money has been spent both by farmers and gardeners in draining such soils that is practically wasted owing to the shallow system of cultivating. Nearly all heavy soils are very productive when they are brought into a condition that the roots, whatever crop is on them, can obtain a proper grip, but the condition of such soils in too many instances is a few inches of loose earth directly over a hard pan of clay, that prevents moisture going down and keeps it on the surface, rendering this sour in wet weather, while in dry seasons the moisture does not rise freely from below as it should do, and cracking and other evils result. In this garden when I took charge of it the men were in the habit of digging without opening a trench of any kind, simply turning the upper few inches of soil over with spades held at a very slanting angle. In consequence, it was the custom to wait for frosts before commencing the preparation of the principal quarters in autumn and working for a few hours until the sun came through and made the surface sticky when the digging was left until the next morning. With an open trench it is quite easy to dig such quarters at any and all times of the day, excepting, of course, just after heavy rain.

The system I follow is to clean round the paths first, throwing whatever loose soil and rubbish there may be pared off on to the bed. Then a trench two spits wide and one deep is taken out and removed to the furthest end, or if the position and shape of the ground will allow it, a start is made at the lowest corner and the trenches are made diagonally. The bottom of the trench is then broken up as deeply as possible with five-tined forks, but none of the bottom soil is brought to the surface. This bad soil below is the bugbear of those who will insist that heavy soils ought not to be deeply dug. If the quarters are to be manured the manure is then put in and the upper inch of the surface, which is often weedy, is pared off and put into the trench. The next two spits are then turned over on this. By this means the men have a clean and dry piece of ground to stand upon instead of the loose surface, every inch of the soil is moved—an impossibility under the other system—and no bad soil is brought to the surface. Very little consideration is sufficient to show that every season the tilth must be deepened, the mechanical condition of the soil is improved so that frost, air and light penetrate more deeply and, above all, surface water gets away more rapidly. Soils so treated improve in a remarkable manner in short, and very quickly; it is easy to get on them early in the season and owing to the deeper root-run the crops thrive much better.

It should, of course, go hand in hand with efforts to improve the staple itself, but this unfortunately is not so easy. Heavy soils that

are deficient in lime are much improved by placing small heaps of unslaked lime, say a pailful in a heap at intervals of about 4 yards or 5 yards apart all over, gathering most of the surface soil and placing over these heaps which, as the lime slakes, breaks down finely and may again be spread about. I have frequently seen this practised on quite large fields in several of the South Wales counties, and not only does it improve the surface tilth, but it is very destructive to various insect pests. Burning the top spit again is of the greatest utility, but this is expensive over large areas, though very applicable to gardens. Such additions to the soil as burnt earth and garden refuse, road sand and ashes are, of course, well known to be serviceable, but this is a very slow and tedious way of lightening and improving these stubborn clays and loams. H. R.

Carrot Early Gem.—The roots from the early autumn sowings still in the ground ought to have a little protection now that most of the leaves are down, as a few sharp frosts have occurred, and these young roots are more tender than fully grown ones. Where there is plenty of convenience in the shape of brick pits, early forcing may commence on hotbeds of leaves, and this kind is an excellent one to sow at the same time as one of the early forcing kinds to form a succession to the latter.

Turnip Green Ring.—This Turnip is also known as Greentop White, and possibly by other names, as is usual when a good variety is in the hands of several seedsmen. I always grow as much of it as possible, as I consider it the hardiest of the white kinds, and only a little, if any, behind the yellow ones, while it is of superior quality to the latter in most cases. After those of the Snowball type are past it is very useful to fall back on, as at this time of year there is a great demand for all kinds of roots for flavouring. Late sowings that do not turn in may be left in the ground, and will yield a useful crop of greens in spring.

Heeling in Broccoli.—It is perhaps somewhat premature to speak of this work yet, but it is very easy to be caught napping, and we sometimes get frost and snow ere November is ended. Some gardeners entirely ignore the practice, but there can be no doubt that many a useful lot of plants has been saved by banking up the stems. Much depends on the district, position of garden, and the variety grown, also whether plenty of room was allowed at planting time and a moderately rich root-run only given. The dwarf-growing varieties such as Model and Backhouse's Winter White seem to escape more often when unprotected than those having a greater length of stem exposed. I have known hay-bands entwined carefully round the stem and amongst the leaves immediately under the crown with very good results.—J.

French Tomatoes.—Having read in last week's GARDEN the interesting notes on Tomatoes, I think you will be pleased, perhaps, to add the result of my experience to the answers of your correspondents. I consider Reine des Hâtes the best Tomato for winter and early spring. It is undoubtedly the earliest of all French varieties. I cannot compare it with English ones, as I have not tried them. It requires but little heat and is not liable to mildew. It begins to bear clusters very near the soil, and yields medium-sized, smooth fruits, which are perfect both in colour and flavour. Its freedom of setting is, perhaps, not quite satisfactory, but to decide this I will grow it another year. Ponderosa is a capital Tomato for amateurs. I do not know of another that grows so vigorously and bears so heavy a crop of large fruits. Varieties of Tomatoes being so numerous, it is impossible to say which is the best, the season and conditions under which they are grown having to be taken into account. Though a fruit, the Tomato must take its place in the market or at

exhibitions amongst vegetables, since it is unprovided with the sweet flavour which is, I think, the best criterion of a dessert fruit. In France it is generally served up with meat, and consequently is always looked upon as a vegetable.—FELIX CH. NAUDIN, *Antibes (A.M.), France.*

Pickling Cabbage.—These are indispensable in all gardens, but they sometimes cause disappointment in several ways, chiefly perhaps by suddenly bursting open if heavy rains occur previous to cutting. Gardeners are apt to make matters worse by allowing red Cabbages to stand uncut too late in the season. Some cooks prefer them after they have received a few sharp frosts on them, but wholesale bursting then often occurs. If not required at once, it is wise to pull them up and suspend them from the roof of a cool shed or outhouse; splitting is then avoided, although they are really crisper when pickled straight from the garden. Large ungainly heads seem to split more readily than the medium ones, and having proved this, I have sowed seed in February in a Carrot frame or boxes and secured good useful heads, which have remained plump and sound till frost came. If any have been unsuccessful with their autumn seedlings, they may with every confidence sow as advised.—J. C.

NOTES ON TOMATOES.

— I consider the best Tomato to be Perfection either for summer or winter use; at least, I have found it so. I tried Tomatoes here outside in 1893, which was a good season, but they did not pay for the labour, so I have never grown them again. I consider the Tomato a vegetable.—J. JEFFREY, *Harewood House Gardens, Leeds.*

— I consider Early Ruby the best early Tomato that I have grown; next comes Scarlet Queen. For autumn crop I grow Royal Chester. Laxton's Open Air did very well out of doors on the kitchen garden wall. I consider a Tomato a vegetable.—JOSEPH MADDOCKS, *Cowley Manor, Cheltenham.*

— The best Tomatoes are Frogmore Selected, Ham Green Favourite, Chemin Rouge, and a selection of my own, which for cropping and other qualities is superior to the above. It is difficult to decide. Last season Early Ruby and Early Prolific were the best among several others. In this locality Flying Dutchman is claimed to be as good as any outdoors. Frogmore Selected, Chemin Rouge, and Sutton's A 1 I have found good for autumn and early spring. Those who eat the Tomato uncooked would probably call it a fruit, while those who prefer it cooked may look on it as a vegetable. I should say it is a fruit.—T. H. SLADE, *Pottimore Gardens, Exeter.*

— The best Tomatoes are I find Stirling Castle, Conference Improved, and Eclipse. Setting and flavour are largely a matter of management so far as the small-fruited varieties are concerned. Early Ruby is a reliable sort for outdoors and early work. The Tomato is a vegetable, as such it is cooked; employed raw in salads and when eaten without preparation it is not as a dessert fruit, but nearly always along with something else.—R. P. BROTHERSTON, *Tynningham, N.B.*

— The Tomatoes I grow after giving a number of varieties a fair trial are Perfection and Ham Green Favourite. These when well grown are, I consider, difficult to beat. For a yellow I grow Golden Queen, and for winter the same varieties. In early spring Early Ruby is good. I consider the Tomato a vegetable.—J. SOUZA, *Walhampton Park, Lymington.*

— So far as my experience goes I have found Ham Green, Dedham Favourite, and Conference excellent Tomatoes. As a finely-flavoured and free-setting Tomato of excellent shape and size I would choose Regina. I do not think anything of the much-lauded Best of All, which opinion is also held here by others. I find it woody and tasteless. For early crops and for outdoors I have yet to see a better than Earliest of All. I have tried a small Plum Tomato (red) here, but find it leathery. Of the yellows I only know Sun-

beam, which is good, though not a heavy cropper. Its appearance with its flushed cheek is very taking. I have one other very fine round Tomato which I do not know the name of, and locally called Bracknell Giant. For actual weight of crop here I suppose Maincrop would beat all. The lower trusses had from eight to fourteen good fruits. I should call the Tomato a vegetable.—H. GALLIFORD, *Furley Copse, Burfield, Berks.*

— I find Hero of Chester does better than any other I have tried, and it is of excellent flavour. Scarlet Queen I find a very free setting variety in winter and spring. I think the newer sorts of Tomatoes are the best, as they are smoother, of better shape, and of better colour. I consider a Tomato more of a vegetable than a fruit.—C. STEWART, *Haynes Park, Bedford.*

— I consider Perkins' No. 1, Frogmore Selected, and Cannell's King the best. Perkins' No. 1 was by far the best outdoors with me last year. It was tested by the side of ten other varieties. I do not grow Tomatoes for winter use. For early spring work I like Perkins' No. 1 and Frogmore Selected. I consider the Tomato a vegetable.—W. HAYLOCK, *Elington Park.*

— I consider Trophy the very best in cultivation, taking into consideration size, colour, flavour and cropping. In the yellow varieties Greengage is still the favourite. Early Ruby I find the best for autumn and spring work. I consider the Tomato a fruit.—BAILEY WADDS, *Birdsall Gardens, Yorkshire.*

— The best Tomatoes I should say, taken all round, are Up-to-date and Duke of York. Early Prolific and Early Ruby I find are the best for outdoors, and for autumn and spring I prefer Early Ruby. I consider the Tomato a vegetable.—T. H. WINSKILL, *Staunton Park, Staunton-on-Avon, Hereford.*

— The best Tomatoes I find are Challenger, Conference, Frogmore Selected, Ham Green Favourite and Perfection. The best outdoor kinds are Earliest of All and Laxton's Open Air. The best kinds for winter I find are Ham Green or Conference, and for early spring Early Ruby. I consider the Tomato a vegetable.—G. WADESON, *Doveridge Hall Gardens, Derby.*

— I find Early Ruby one of the very best as it sets well, carries heavy crops of bright red round fruit and also does very well outdoors. I also find it extremely useful for sowing about the middle of June for giving a supply through the autumn up to Christmas. Frogmore Selected is also another grand Tomato very prolific and the fruit of good size, even and round in shape, bright red and of good flavour. Hackwood Park is a fine Tomato and of good flavour, but it does not set so well with me. Perfection is a good exhibition sort carrying heavy crops of large round bright red fruit. I think the Tomato should be classed as a vegetable, as it can be served up in so many ways.—C. PENFORD, *Leigh Park Gardens, Harant.*

— Perfection and Conference have always done well with me. For setting and for flavour I am disposed to give the place of honour to Up-to-date, which I consider an excellent Tomato. I should consider a Tomato, properly speaking, a fruit.—J. SHORT, *Hummersknott, Darlington.*

— Amongst red Tomatoes, the one that stands out above all others is a variety named The Cropper. I favour it here on account of its excellent appearance, freedom of setting and delicious flavour. This variety, if the strain is kept pure, will rank amongst the very best Tomatoes in cultivation, all points considered. I find here that it is a good plan to grow Tomatoes from cuttings; they set with greater freedom and I think a heavier crop is obtainable if this method is adopted in preference to raising plants from seed. Earliest of All is the best outdoor Tomato I have grown, and I am also well satisfied with it as a winter and spring cropper. Amongst the yellow varieties, Golden Jubilee is perhaps the best yellow kind for a general summer crop. Judging it from every point of view, it must be well spoken of by those who use Tomatoes either as a fruit or a vegetable. The Tomato, properly

speaking, must, I think, be catalogued as a fruit, but, like some other fruits, it can be with advantage used as a vegetable either by itself or mixed with other vegetables, as the cook may think proper. To call the Tomato a fruit is the proper definition in my opinion.—JOHN MACKINNON, *Terregles, Dumfries, N.B.*

— I can recommend Frogmore Selected and Best of All for winter fruiting. Sutton's Early is a good one for outdoor culture. I consider the Tomato is either a fruit or a vegetable according to taste. Some people prefer to eat it as a fruit, while others prefer to have it cooked. It was always looked upon as a vegetable until about twenty years ago.—JOHN GLOVER, *Belle Vale Farm, Gateacre.*

— Earliest of All is the best for growing under glass and is also the best flavoured. Perfection is the best outdoor kind. I always considered the Tomato a vegetable.—JAMES TEGG, *Bearwood.*

— The Tomatoes I consider to be the best are Polegate, Ham Green Favourite, Earliest of All, Frogmore Selected, Duke of York, Chemin, and Perfection. The best outdoor Tomato is Maincrop, and the best kind for winter and early spring Chemin. The Tomato I consider a fruit.—D. COOPER, *The Gardens, Hanger Hill House, Ealing, W.*

— I have tested a number of Tomatoes, including the newest varieties, but find nothing so good as Conference. It is quite big enough, a capital grower and cropper, solid, and of good flavour. Tomatoes do not succeed out of doors here. I grow Ham Green, Hathaway's, and Conference. If restricted to one I would choose the last. I consider the Tomato a fruit. The best flavoured Tomato I consider to be Golden Queen. I had a strong prejudice against yellow-skinned fruit, but am compelled to acknowledge that in delicacy of flavour and firmness of flesh this beat all. Jubilee seems equally good, but I should like to test it further before expressing a decided opinion.—W. B. UPJOHN, *Worsley, Manchester.*

— I have tried many so-called new sorts, but have found none to beat Ham Green. Frogmore Selected holds second place; this is slightly corrugated, but is a most excellent free-setting and good quality variety. For outdoors I have found none better than Earliest of All, Sensation, and Carter's Outdoor. The only drawback to the last-named is its corrugated form, but this may be overlooked, being a heavy cropper, of excellent quality, and one of the first to colour. Those who have to depend on outdoor Tomatoes I would strongly recommend to give it a trial. For years I have grown Earliest of All, Frogmore Selected, and Conference for winter and early spring use, and could wish for nothing better. I consider the Tomato a vegetable.—F. CLARK, *Orchardleigh Park, Frome.*

— In my opinion Maincrop is the best Tomato for private gardens. It has a fine strong constitution, is free-setting, bears freely, is of good flavour, and resists disease. I have tried all the leading varieties, but I cannot find one to come up to Maincrop. The best outside varieties here are Trophy, Hathaway's Excelsior, and Frogmore Selected. Chemin I consider one of the best winter sorts. I consider a Tomato a vegetable.—A. MCGLASHAN, *Wedmore Court, Bromley, Kent.*

— My favourite varieties are Ham Green, Regina, Royal Jubilee and Perfection. The best outdoor variety is Ham Green. I should think as the Potato-Apple is a fruit it would be rather inconsistent to class the Tomato strictly as a vegetable.—T. CHALLIS, *Wilton House, Salisbury.*

— I have not tried many kinds, but have stuck to a selection of Hackwood Park for a general crop. It sets freely and is a good sized fruit, and smooth. I grow it in quantity against walls, and have found nothing better. For early fruiting Earliest of All is the best I have grown. I have no experience of winter crops. I always look upon a Tomato as a vegetable, and should never think of exhibiting it in a collection of fruit.—R. LLOYD, *Brookwood Asylum Gardens.*

PENJERRICK.

THIS is the fairest garden I have ever seen in Britain, absolutely distinct and almost wonderful in the vigour and grace of its trees and rare shrubs. The gardens fill a little

forgot all about a garden as we know it. It is curious how often in our wind-swept isle we see this graceful sub-tropical effect—at Mount Usher, at Fota, at Carhays, Menabilly, on the colder east coast now and then, and

effects resulting from the right use of the many fine things that may be so grown.

Penjerrick is a few miles from Falmouth, and for very many years was occupied by the late Miss Fox, who was devoted to her garden, and throughout these lovely grounds there prevails that charming simplicity which so surely indicates a love for the beautiful in Nature. The ground is traversed by a public road on a lower level, and the rustic bridge over the road which connects the distant parts of the pleasure grounds with those near the house is so planted out that no line of division can be observed. The grounds contain, among other beautiful plants, fine Magnolias, groups of rare Himalayan Rhododendrons, including the variety *R. Roylei*, which is but seldom met with. Here also is what is probably the finest specimen in England of *Arundinaria nobilis*, whose graceful fronds measure over 24 feet in length. In a shady glen close by is a Tree Fern (*Dicksonia antarctica*) with an unusually large head of perfect fronds, and which has been grown out of doors for years. Among other Ferns in this glen *Lomaria magellanica* grows profusely, and has handsome evergreen fronds. A most picturesque effect is produced by the pendent branches of a Weeping Beech fully 80 feet high. Among the many conifers is *Fitzroya patagonica*, 25 feet to 30 feet high; *Dacrydium Frankini*, about 10 feet by 12 feet; *Cephalotaxus Fortunei*, 14 feet high by 12 feet through, and *Podocarpus andina*, fully 40 feet high. Very beautiful when in bloom are an *Embothrium coccineum*, about 40 feet high, and *Acacia melanoxylon*, nearly as large. V.



Dacrydium Frankini at Penjerrick, Falmouth. From a photograph by G. Champion.

valley sloping seawards and 200 feet above it, and looking from the house down the garden vale it seemed in some lovely Pacific glen, not a trace of any of the conventional lines we see in gardens visible; in fact, one

even in Northern Ireland, as in Lord Annesley's grounds at Castlewellan, and these and many other sea-warmed gardens have many charms, but Penjerrick more than any garden I have seen has the most picturesque

Symphyandra Hofmanni.—While the mild season is responsible for the continuance of this plant in bloom, it is yet worthy of a note, though its wonted time of flowering is over. Although it is with me only of biennial habit, it reproduces itself so freely by means of self-sown seedlings, that it is to all intents and purposes as good as any hardy perennial, with the exception that it cannot be depended upon to come up in exactly the place desired. It has now been here for several years and has never failed to give me more than enough of young plants to serve my purpose. I have at command very little information regarding it in its native habitats. It, however, comes from Bosnia. It cannot have been long in cultivation in this country, and one seldom meets with it in gardens. Some two or three years ago I came across some plants of what looked like the same thing under the name of *S. Kaufmanni*. I ventured to say at the time that they would probably prove to be simply *S. Hofmanni*, and that the name of Kaufmanni had arisen from a blunder not difficult to understand.

On comparing the plants at their flowering time it was found that they were identical. I mention this as it is likely that others have received the plant under the name of *S. Kaufmanni*, and, so far as I can discover, there is no such plant. Like the other *Symphandras*, this species is very like some of the *Campanulas*, but possesses the connate anthers which pertain to the genus. Here it forms a neat conical or pyramidal bush a foot or more in height, producing a number of bell-shaped white flowers. As the wider or open part of the bell is turned to the ground the flowers are not so effective as if upturned, but they have the merit of lasting much longer than if the flower were erect. It grows well in the light soil here, and, though not showy, is frequently noticed by those who know something about plants. Seeds are procurable from some seedsmen in spring.—S. A.

CHRYSANTHEMUMS.

CHRYSANTHEMUMS AT FRAMFIELD.

A visit to the charming old village of Framfield, Sussex, is at all times an event looked forward to, but at this season of the year when the *Chrysanthemums* are at their best, an inspection of the collection of Mr. Norman Davis is interesting. The vineries face south-west, and here the *Chrysanthemums* appear to revel. In the lofty and lengthy houses the 14,000 plants, which are grown for market and exhibition, are arranged. Contrary to the usual rule in nurseries, the plants are not crowded in the houses; instead, there is plenty of room for each plant to be handled and examined, and as a result the floral display is probably unequalled. One of the sights at this establishment is the exceptionally grand lot of *Mme. Carnot* and its sports, *Mrs. Mease* (sulphur) and *G. J. Warren*, the lovely canary-yellow flower. These plants are flowered on second-crown buds, and consequently are somewhat tall, though not so tall this year as usual. A row of plants on either side of a long house contained these three sorts, and without exception they were all fit for exhibition. The pots were not by any means large, those 9 inches in diameter being the popular size. A splendid batch of Mr. H. Weeks' seedling, named *Mrs. Barkley*, showed how valuable it is for exhibition. The florets are very broad and strap-like in their formation, the colour rosy pink, with a silvery pink reverse. Another seedling from the same raiser named *Victory* is a very promising flesh-pink Japanese; flower of large size and great depth, petals broad and numerous, building up a massive bloom, the plant of good habit. *Henry Weeks*, rosy crimson, flushed carmine, Japanese, was in evidence everywhere. The plant is one of easy culture, and no doubt next season, when it has recovered from persistent and continuous propagation, the blooms will be frequently staged. *R. Hooper Pearson*, the richest yellow Japanese, was flowering freely. Propagated late, little time had been left for the plants to make much progress; all the same, they were developing useful blossoms in this case, coming like a vastly improved *Oceana*. *Lord Cromer* appears to be one of the best of the new crimson Japanese flowers, although in this case the blooms were rather flat. When grown strongly and given a long season of growth, the blooms should be deeper and the colour rich. The petals are of medium width, the reverse of a pale gold colour. Blooms of *Madeline Davis*, although not over large, were refined and pleasing. The colour may be described as pearly white, tinted rosy violet. The petals are of medium width, though rather short, but they are numerous and make a chaste and full bloom. The habit is dwarf. *J. R. Upton*, a plant from the *Antipodes*, comes up to expectations. The blossoms seen here this season were of immense size, and should be useful on the exhibition table. The florets are very long and broad, developing into a deep rich yellow flower. Great value is set

upon the blooms of *Western King*, regarded here as representing all that is chaste and beautiful. The blossoms belong to the incurved Japanese type, and they are of the purest white. Each plant will develop a goodly number of large flowers on a most desirable habit of growth. Another more recent novelty is *Annie Prevost*, very similar in form and colour to the last named, but the flowers are larger. When finished the blooms have quite a globular form, and the plant possessing a dwarf, sturdy habit, it may be considered one of the best varieties for grouping in cultivation. *Samuel C. Probin* is a good companion plant to the last named, being a dwarf, sturdy kind. The blooms are large and massive in build, with broad petals curling and incurving at the ends. The colour may be described as cherry-crimson with a pale silvery reverse, and the plant is of easy culture. A welcome addition to the Japanese is *Miss Maud Douglas*, this being a pale rose-pink flower with a silvery reverse. It is a large, somewhat loosely incurved Japanese bloom, late flowers throwing back their rather broad petals pleasingly and making an exhibition sort of high merit. The tint of pink is distinct from all others. The plant has a good constitution and also a good habit. Another sort belonging to the incurved Japanese is *Mrs. W. Cursham*. This plant was certificated by the National *Chrysanthemum* Society last season, when its unique petals and form were greatly admired. The petals are broad and of splendid substance, prettily curling at the ends and tightly incurving. The colour may be described as flesh-pink, with a pearl-coloured reverse. A few plants of *John Bridgman*, a lovely rosy pink flower of the easiest culture, being a kind of refined *Etoile de Lyon* in its build, prove how many really good things are unknown. The flower is a large, full one and the constitution is good.

The manner in which the large Japanese blooms of *Mrs. Coombes* have been exhibited proves conclusively how valuable this sort is. This may be regarded as one of the best introductions of last spring. An exquisite flower is *Emily Towers*, of a rich rose-pink colour, tinted silver. The blossoms are large, having broad pointed florets, making an ideal exhibition variety. An old sort, or at least comparatively so, is *Dauil de Jules Ferry*. This is in grand condition this season, developing blossoms of rich, pure amaranth with a silvery reverse, and proving the wisdom of retaining some of the older sorts. *H. J. Jones* was coming of a deep rich crimson, and not nearly so brilliant as seen the previous season; it may, however, finish a much brighter colour. Over-propagation has much to answer for. Another rich colour was seen in *Helen Shrimpton*, a beautiful cherry-crimson, and a flower of large size. Late buds of *Richard Dean*, usually a very coarse flower, were giving blooms of a very deep rich crimson colour, proving conclusively the correct method of culture has been attained here. The reddish bronze sport from *Edith Tabor*, *Mrs. Barks*, was well represented. This can hardly be considered a pleasing colour. Another excellent sort, especially for grouping, is *Mrs. James Beisant*. This is white, tinted rose, developing a large number of full blooms on a nice habit of growth. A continental introduction, *Mme. A. Roseau*, contrary to catalogue descriptions, was giving handsome blooms of a rosy carmine colour with a silvery reverse. The petals are very long and tubular and form a very large spreading flower. Numerous superb examples of other Japanese sorts were largely in evidence, the most noticeable being richly coloured *Edwin Molyneux*, *Lady Byron*, still one of the best whites, though a trifle early; *Mrs. J. Lewis*, one of the best whites this season; *Lady Ridgway*, rosy buff; *Mme. Rozain*, *Master H. Tucker*, a grand chestnut-red; *Congres de Bourges*, deep puce; *Mrs. T. A. Compton*, white, shaded lilac; *N.C.S. Jubilee*, silvery pale pink; *Mrs. White-Popham*, *Australian Gold*, *Little Nell*, like a white *Mrs. C. Harman-Payne*, and others too numerous to mention.

A pretty collection of incurved sorts included the *Queens*, *Princesses*, and *Tecks*. The newer incurved sorts included grand examples of *Chrysanthemum Bruant*, rosy buff; *Mrs. N. Molyneux*, ivory white; *Topaze Orientale*, straw-yellow; *Ma Perfection*, pure white; *Mlle. Lucie Faure*, pure white, of immense size; *Miss Annie Hills*, blush, of true incurved form; *Hanwell Glory*, bright bronze, and several others. *Anemones* were seen in beautiful form, *Descartes*, reddish crimson, and *Owen's Perfection*, very chaste, with long tasselled guard florets, standing out conspicuously. Decorative sorts are very largely grown, huge breadths of *Klondike*, a very rich yellow Japanese, dwarf and free; *Clinton Chalfont*, a lovely bright rich yellow; *Glady's Roult*, a unique and pretty pure white flower; *Eynsford White*, *Mlle des Plaisirs*, chestnut-crimson, and others of undoubted merit. The thread-petalled and other curious sorts were represented by *Mrs. James Carter*, pale sulphur; *Mignonette*, white, tinted salmon; *King of Plumes*, rich yellow; *Golden Shower*, and numerous singles and charming little pompons.

M. Nonin's seedling Chrysanthemums.

—During the past two or three seasons there seems to be some probability of this French raiser coming to the front. Several of his novelties have done well, and although not favoured with a climate like some of his fellow-countrymen, he has nevertheless achieved a marked success. *Comtesse de Boulancourt*, *Mlle. Louise Brossillon*, *Emile Nonin*, *Mme. Frederic Daupias*, *Mme. Gabriel Debrie*, *Amateur J. Lechaplais*, and several others are now fairly well known and are regarded with favour. *M. Nonin's* nursery lies some little distance to the south of Paris, in the open country. At one time he was the president of the Paris *Chrysanthemum* committee, and his fine group at the Palais de l'Industrie in 1896 will not be soon forgotten by those who saw it.—C. H. P.

New French seedlings.—Whatever may be thought to the contrary, there is little likelihood of a cessation of French novelties which some of my friends seem to be prophesying this autumn. *M. Ernest Calvat* staged at the recent Lyons *Chrysanthemum* show the finest lot of blooms I ever saw, and in addition to his lot, *M. Bonnefons* sent upwards of fifty, many of which were certainly promising, although presented under less favourable conditions. *MM. de Reydellet*, *Heraud*, and *Chantrier* were well represented at the same show, and from *Messrs. Vilmorin-Aodrieux and Co.* there came a very substantial batch of novelties. Other raisers, such as *M. Nonin*, *M. Morières*, *M. Lacroix*, *M. Rozain*, &c., are also actively engaged in the work, to say nothing of the Italians, whose novelties are as yet but little known in this country.—C. H. P.

Chrysanthemums at the Aquarium.

—Never before perhaps has so much effort been expended on the utilisation of the big-bloom *Chrysanthemum* as was to be seen at the Aquarium last week, when the *Messrs. Davis and Jones* in a way renewed their old-time partnership, and virtually joined hands in showing what could be done with these things when a little discretion and good judgment are brought to bear on the work. A finer display of cut blooms artistically arranged has in all probability never before been seen. Arranged side by side almost without division on a specially erected stand beneath the organ gallery, these splendid groups formed a most imposing feature. Regarded individually there was indeed but little between the two, and the little there was had rather to do with the different styles of arranging. Big vases some 3 feet high of oriental pattern were occupied with the finest flowers that could be got. Equally tall, though of course less bulky, were the glass vases, that, too, had their complement of handsome blooms. Disposed here and there these taller vessels constituted the principals, and it was here naturally that a difference occurred in the arranging as also in the furnishing material. On the one hand, the

blooms, arranged in the form of a drooping oval pattern, were fortified with prettily tinted foliage that had a very pleasing effect, and on the other, trails of Smilax and other things were prettily interspersed with the flowers. Standing aloft, as these vases did, afforded ample room for a pleasing array beneath for a groundwork and for subordinate groups and vases generally. This was carried out in excellent taste and with but few plants.—E. J.

Chrysanthemum Hairy Wonder.—The fashion for the curious class of which this is the best was very short-lived—if, indeed, it ever existed outside of dealers' lists—and we now rarely see this variety. It is a flower worth growing because of its curious formation, the

rative or border class, growing barely 3 feet high. A year ago the few plants I then had were in their prime on November 18; this season they are about a week in advance of this. Both last year and again this season no protection of any kind has been given, and a line of it some 50 feet long; every plant of the lot bearing about three fine sprays similar to those sent, was a splendid sight. Although fine, the examples submitted hardly do justice to the fine rich colour, for they have been cut and in water since Thursday, the 9th inst. In the earlier stages the base of the florets displays a rich red-orange tone, thus adding a warmth of colouring invariably admired. What I value most, however, is the exceeding hardness of the variety; indeed, in this respect it is the

tended cultivation, seeing it comes so good and so late in the open air, more especially after the tropical summer we have had.—Ed.

NOTES ON VARIETIES.

In selecting sorts to grow, one must of course look to these exhibited at shows to be somewhat of a guide, but after having seen some thousands within the past few weeks, I have come to the conclusion that there are a considerable number, even of popular exhibition kinds, which are anything but beautiful. It is size, and size only, which makes almost every competitor for prizes include such in his collection. Of course, individual taste has a lot to do with the choice of varieties, but apart from its dimensions we cannot imagine anyone thinking the dull-coloured sort Mrs. C. H. Payne a beautiful type. Unfortunately, from this several others differing in colour only have been obtained by sporting, so that it is rarely one meets with a stand of blooms which does not contain the type, Mrs. G. W. Palmer or Mme. L. Remy. The one is a dull bronze, the other a dirty white. Yet another is forthcoming called M. Louis Remy. This is a yellow, and certainly the best, but there are so many really good varieties of all shades of that colour that I hope this will not become popular with exhibitors too. A careful look at the first-prize collection in the large class for four dozen distinct Japanese blooms at the Aquarium will illustrate my meaning, that although they are big, many of the sorts would not please a grower who may select them because they were included in the winning stand. Pride of Exmouth is a full deep bloom, but short in the petal, with little grace in formation, and not a pure white. Mr. A. Barrett is another sport from the variety just noted and has the same defects, being a large mop-like, ugly flower. Mrs. J. W. Barks is a very dull bronzy sport from a charming yellow variety, Edith Tabor. M. Hoste is big, but wanting in grace and substance, and Mme. Gustave Henry a bad white of flat, dumpy form. Mme. A. Brun does not appeal to me at all, and Susie has washed-out shades of white and rose. This stand contained many that were indeed charming, and a very good selection might be made from it. G. J. Warren, E. Molyneux, Mme. Carnot, Mrs. Mease, Phœbus, Nelly Pockett, Lady Hanham, Miss Elsie Teichmann, Mrs. Barkley, Surpasse Amiral, Vivian Morel, Emily Towers, Le Grand Dragon, Lady Ridgway, Eva Knowles, and Oceana are lovely types. So, too, is Lord Ludlow, a bright bronzy yellow of much refinement.

A very beautiful flower of President Bevan was to me one of the surprises of the year, and when its culture is better understood it will be highly esteemed. Its rosy buff tint is a charming shade, and its loose, incurving form perfect in its way. A magnificent white is Florence Molyneux, but like another grand white, Mrs. H. Weeks, it is, I believe, somewhat shy in producing such huge, well-formed blossoms, and one must grow but a single flower to a plant. A few choice varieties are: Henry Weeks, crimson; Hero of Omdurman, crimson, with buff tint; Mrs. Coombes, pink; Edith Dashwood, mauve tint; and W. Cursham, buff. These are among the best of Chrysanthemums, and all novelties of this year raised in this country by Mr. H. Weeks. J. R. Upton is a splendid yellow; it appears to me even finer than G. J. Warren. The colour is richer and its form is most graceful. The Wonderful has a name which is too high-sounding, at least until we see more of it. Roslyn is an advance in colour, the shade deep lake, quite a violet tint. The flower, too, is of capital form. Lionel Humphrey is a big reddish bloom, but there is a want of finish in its recurving shape. Mme. Desblanc, a clear pink of deep incurving form, will be esteemed by many who like this type of the Japanese.

From a point other than size and a useful yellow for cutting appears to be a variety named Klondike. The blooms are kept erect by a very



In the garden at Penjerriek. (See p. 413.)

downy nature of its florets being such a novelty. The sort is somewhat tender in winter and difficult to keep; hence its propagation will always be slow. Once established as a small plant, it succeeds well with ordinary treatment and blooms of large size are obtained. The colour is a decided tint of buff and varies in depth, the later buds giving the better colour. If other kinds of different colours equal to this were raised, there is no doubt they would find plenty of admirers and also add to the interest the Japanese varieties give.—H.

Chrysanthemum Golden Sheaf.—I am sending you a couple of sprays of one of my seedling Chrysanthemums which I have named as above. It is, as you will observe, of the deco-

est I know. For this reason I hope to raise others from it. Though quite a fine display has been made by the plants, many of the central buds bore evidence of enforced blindness from the prolonged heat of summer, and I am surprised any blossoms so good as those sent ever appeared at all. Golden Sheaf is the result of crossing an improved and well-coloured form of Mrs. G. Wernig with pollen from Admiral Symons. The seedling has inherited the colour and strap-shaped florets of the pollen parent and partaken in the habit of growth somewhat of the seed parent—that is so far as height and freedom are concerned.—E. H. JENKINS, *Hampton Hill*.

*** Very beautiful richly-coloured flowers. This variety is well named, and it is well worth ex-

stout stem. Golden Shower is of quite a different type and will be liked by those who care for the curious. It is reddish-bronze in colour, and the hair-like florets hang so lightly that it should prove a valuable kind for cutting. Etoile de Feu is another valuable kind, the red and gold being so bright and effective. There is just a suspicion of its not being a good one to last when cut, but it is so distinct that one must try it.

Nelly Pockett is charming from every point of view, the blooms the perfection of form, of pearly whiteness and with a stout stem. In bush form grown in small pots it makes a pretty plant. So, again, does John Pockett. The colour of this is distinct; Indian red with buff reverse would describe it. Master H. Tucker is a crimson-coloured sort and grand for general cultivation, but it is usually spoiled by the severe dis-budding adopted to make it come big. It may be grown large, it is true, but, as we mostly see it, the colour is not striking. Apart from their value as show blooms, that fine trio, Vivian Morel, George Davis and Lady Hanham, are excellent for all purposes to which Chrysanthemum flowers may be put, and William Seward in its rich crimson shade has few equals.

H. S.

CHRYSANTHEMUMS AT LEWISHAM.

THE Ryecroft Nursery, now well known for its Begonias, Pelargoniums, and other subjects, is just now very gay, several large glass structures being full of Chrysanthemums. Considering there are about 7000 plants on view, the effect can be, perhaps, better imagined than described.

Although the Ryecroft collection contains the cream of all the foreign raisers' productions, there is a goodly number of varieties which are purely of Mr. Jones's own raising. It follows that many of these are not yet widely known, but there can be little doubt that in the future many of them will make a name for themselves amongst the most fervent admirers of the autumn queen.

Among Australian kinds of recent date, Mr. T. Carrington, Oceana, Wallaroo, The Wonderful, Nellie Pockett, and Fair Maid, a large Japanese of a delicate shade of pink, but rather tall in growth, are noteworthy. From other sources in good and effective shades of yellow, J. E. Clayton, a very pure, fine yellow sport from Eva Knowles; R. Hooper Pearson, deep and rich; Mr. Gerald Williams, Sir H. Kitchener, Mrs. A. Cross, Solar Queen, and Hugh Crawford are worthy of special mention. Mr. A. Barrett, rosy buff; Edith Da-hwood, of nice form and of a pretty pink shade, are also good, but very much brighter and finer than the last named is Mary Molyneux. Lionel Humphrey is a fine crimson and gold of large size, and much more vivid in colour is H. J. Jones. Other sorts of varied form and colour are to be found in Mrs. W. Seward, H. Weeks, Lady Hanham, Mrs. Coombes, Emily Towers, Mrs. White-Popham, Mrs. Barclay, fine silvery pink, and Mr. W. Mease, a fine warm terra-cotta sport from the old favourite Etoile de Lyon. Of sports there were several interesting forms from well-known varieties besides those just mentioned, for we noticed a sulphur Mutual Friend, a yellow M. Chenon de Leche, and a most striking deep crimson sport from President Borel, which will certainly rank among the good things for the October displays.

Continental varieties, both new and old, include M. Fatzler, always good; Mme. C. Terrier, N.C.S. Jubilee, M. L. Remy, Mme. Gabriel Debré, pale pink, one of M. Nonin's best; the curious green Mme. Ed. Roger, President Bevan, Rayonnante, M. Chenon de Leche, Mrs. J. Lewis, Le Grand Dragon, &c.

Although the collection contains a fine display of the highly coloured purples and crimsons, some of the paler and daintier colours are by no means less attractive, including G. J. Warren, and Mrs. S. C. Probyn, delicate pink. Good whites are represented by Simplicity, Mutual Friend, the newer Princesse Bessaraba de Brancovan, Jane Molyneux and the like. In hairy varieties there

were some excellent examples of Hairy Wonder, which still maintains its well-deserved reputation, the pure white variety known as White Swan, and a pale pink novelty called Prof. Jacquinet.

The incurred section, of which the Ryecroft collection contains a very choice selection chiefly for stock, is not largely represented in the annual display, but Mrs. H. J. Jones, a fine flower very deep and regular in build, is of a beautiful shade of pure white faintly tinted with pink. In another house there is a pretty display of freely flowered bush plants, which show very plainly that the Chrysanthemum can be grown and utilised for other purposes than merely figuring on the show-board. These comprise the very effective Ryecroft Scarlet, Mabel Williams (white), Ethel M. King, Pride of Mychett, Sunbeam (golden-yellow), the white Clinton Chalfont, White Quintus, Nellie Brown and several excellent medium-sized decorative Japanese which are of great service for this form of floral adornment or for cutting in quantity.

The collection, notwithstanding the inroads made upon it at this season of the year for the numerous exhibitions, contains many more sorts than we can conveniently find room to notice.

Hairy Chrysanthemums.—When the first of this class or Chrysanthemums (Mrs. Alpheus Hardy) made its appearance in this country it was heralded by such a flourish of trumpets that one was inclined to look upon it as indispensable to any garden, and the varieties that succeeded it were just as highly praised. Now, however, many gardens and exhibitions of Chrysanthemums may be visited without finding a single representative of this class, except Hairy Wonder, which is far the best of the hairy section of Chrysanthemums. In a stand of cut blooms its distinct appearance singles it out at once for notice. This variety when first exhibited in the autumn of 1894 received an award of merit from the Royal Horticultural and a first-class certificate from the Chrysanthemum Society, but it was not half so much talked about as the earlier kinds which have not stood the test of time.—T.

Chrysanthemums—discarding old varieties.—Like "H." (p. 359), I think it has not been an unmixed gain by any means the loss of some of the older varieties, and undoubtedly some of those he names are as good as the best in cultivation to-day. The constant running after new kinds that are little, if any, improvement on the older ones has sickened many of the cult. It is a well-known fact that judges of Chrysanthemums give points to new kinds, and though a grower may stage equally good varieties and as well grown, a stand with new kinds in it takes the prize. I can bear out all "H." says in regard to Belle Paule. This lovely variety was very much admired when sent out some eleven or twelve years ago, and there is no more graceful or beautiful kind to-day that I know of, though having been out of the exhibition arena this last ten years, I am, perhaps, not so well qualified to speak as "H." Jeanne Délaux, or F. A. Davis, as it was at one time labelled, is also a lovely kind, but it was always a weak grower, and one of the kinds that cultivators some years back used to graft on a strong-growing kind like Comte de Germiny. This variety, again, as far as I am aware, has never been beaten in its distinct colour, and is as well worth keeping as the somewhat uncertain E. Molyneux.—SUFFOLK.

Single Chrysanthemums.—These are again proving their value for conservatory and house decoration, nice little plants with heads about a foot across being easily grown in $\frac{1}{2}$ -inch pots. Such plants now covered with the charming Marguerite-like blossoms cannot fail to please, and as they are so easily reared, one never feels any compunction about their use in rooms where rare or valuable plants would be likely to be injured. They are of course just as useful for growing on into larger plants, but it is small shapely bits for room decoration, filling small vases and forming a change in groups of larger

kinds that are so much wanted now. Struck at various times from March onwards until June, they will be of various useful sizes. During their growing season they should be given a good light position outside, but not quite in the sun, as this is apt to make the lower leaves fall, and naturally with such plants as these it is important that these are kept on. It is not wise to overfeed these small plants, as the object is not so much large individual flowers as a pretty general effect. At the same time starvation treatment will not do, this also causing the loss of foliage noticed above. Liquid manure or top-dressings, the former once a week, the latter once in three, from the time the pots are well filled with roots will be ample.

—Whilst the present mode of exhibiting these exists they will never become popular. The flowers neither lend themselves to severe dis-budding nor to be staged on flat boards. To see them at their best the plants must be cultivated in a natural style and every bud allowed to open. I saw at one exhibition this autumn plants grown in the manner stated above used most effectively in a group by forming a groundwork. Plants bearing large blossoms were dotted in among them at irregular intervals, and the whole produced something choice in floral arrangement. Show singles are to my taste too large, and many of them are indeed manipulated to make them single, *i.e.*, florets are taken away which if left would make the variety what it really is, a semi double one. This habit brings disappointment to those who select kinds from exhibitions. My idea of a single variety is one that has but one row of florets and a good centre disc. Snow Wreath, white, and Miss Mary Anderson, tinted white, are capital forms. Another, Miss Rose, is quite alone in its habit of growth. This does not produce long, raceme-like branches as most of the sorts do, but forms a dwarf, bushy plant that gives a level-looking mass of pretty light rose colour. From those at present in bloom the following are selected as excellent in every way: Annie Tweed, crimson, of a dark shade; Earlwood Beauty, white; Emily Wells, rose colour; Eucharis, white; Framfield Beauty, crimson; Golden Star, yellow; King of Siam, crimson; Miss A. Holden, light yellow; Mrs. D. B. Crane, cerise-pink; Mr. A. Double, terra-cotta; Purity, white; Rev. W. E. Renfrey, purple-red; Scarlet Gem, bright terra-cotta; and Snow Wreath, white.—H. S.

CHRYSANTHEMUMS AT CHELSEA.

MESSES. VEITCH AND SONS have a collection of Chrysanthemums that shows great discrimination has been exercised in deciding what varieties shall be admitted into it, and also that considerable care is bestowed upon it in growing the plants for exhibition at this time of the year. The number of varieties may possibly be fewer than at some of the trade displays, but at any rate they are of the best in their various sections, and, considering the disadvantages that the town growers of the popular flower labour under, it is surprising to see what can be done under adverse circumstances. Chelsea is not the best place in London in which to grow the Chrysanthemum, yet we have never failed to be surprised at the finely-developed blooms we always see there, and occasionally, as this year, when our call is early enough in the season, to find the colours so clearly and nicely defined, for it is chiefly perhaps in this respect that the country-grown blooms show the difference to an ordinary observer. In the large span roofed house devoted to the major part of the collection we noticed first of all H. Weeks, a large Japanese, with florets slightly curly at the lips, colour dull crimson, with reverse of gold. Emily Towers is another large Japanese, with broad florets, colour white, tinted purple.

Some good varieties of Calvat's are there, and notably N.C.S. Jubilee, a beautiful silvery pink variety now well known. Then M. Fatzler is good everywhere, and we can say this with certainty, having seen blooms in London, Paris, and Lyons.

Le Grand Dragon, M. Chenon de Leche, Mme. Carnot, and Soleil d'Octobre have all been described many times, and are at once standard sorts and eminently suitable for all purposes. The curious green Mme. Ed. Roger is in good form, and among other varieties from this source Mrs. J. Lewis, a white introduced a few years ago; Marie Calvat, white, shaded purple; and Louise, a beautiful pearly pink Japanese incurved, do remarkably well. In various tones of yellow from pale sulphur to the richest golden we see such grand things as Mrs. W. Mease, Lord Ludlow, Phœbus, Modesto, Princess Charles of Denmark, Sir H. Kitchen, and R. Hooper Pearson, while whites are well represented by Mrs. Weeks, Elsie Teichmann, Nellie Pickett, Kathleen Rogers, big and solid, Lady Byron, and Mrs. C. Blick. W. Seward is fine in its velvety deep crimson. Rayonnante is a curious deep pink porcupine variety, and in purples Mr. T. Carrington, Australia, and Mrs. White-Popham all help to brighten up the group. Chatsworth, a colonial variety seen last year, is very good again, and other brightly coloured sorts are still used at Chelsea in such as J. Shrimpton, Hairy Wonder, Pride of Stoke, J. Bidecove, &c.

In another house a lot of very useful bush plants is flowering freely, and only shows to what uses the Chrysanthemum can be put besides being grown for exhibition. Very attractive are some of the popular show sorts in this form, and Messrs. Veitch have some nice plants of W. Tricker, Souvenir de Petite Amie, J. Shrimpton, October Yellow, Charles Davis, W. Seward, Source d'Or, Dr. Sharpe, Lady Selborne, Mme. Carnot, and it would be difficult to say how many more.

NOTES AND QUESTIONS.

Chrysanthemum Firefly.—This Anemone pompon is not nearly so well known as it deserves. It is a reddish coloured blossom with a bronzy-yellow disc, and is one of the most effective small flowers. For associating in a limited degree with yellow and orange-coloured Chrysanthemums it is unequalled. Under artificial light growers will find this sort a splendid acquisition.

Chrysanthemum Chrysantheme Bruant.—This is a distinct acquisition to the incurved section, and during the past fortnight has been exhibited in several leading stands. The blooms are large with beautifully incurved florets of good breadth, early flowers opening a rosy buff, later buds developing large globular flowers of a chestnut-bronze colour. The plant is of medium height, and is also of easy culture.

Chrysanthemum H. J. Jones.—On account of its colour this was thought highly of last autumn, and it certainly is an advance in that direction. A bright crimson-scarlet is a tint really wanted. The size and form of the blooms are excellent. Probably there is a shortness in the florets that will not please exhibitors, as sorts not having long ones cannot build up a flower of huge dimensions, but in every other respect it may be recommended.—S.

Chrysanthemum Hanwell Glory.—Though only seen for the first time at the end of last season and not distributed until the spring of the present year, growers of the incurved type of the Chrysanthemum have already recognised the merits of the flower for exhibition. Beautiful examples have been freely exhibited, large, deep, globular flowers of a bright bronze colour, each bloom neatly incurved. Like the newer Japanese sorts, the incurved blossoms are getting larger.

Chrysanthemum Clinton Chalfont.—This lovely Japanese Chrysanthemum has always been regarded as an October-flowering variety, but, owing to a late season, blossoms of a bright rich yellow are now and have during the last week been at their best. The colour deepens slightly in the centre of the blossoms. The plants should be disbudded, as in this way the blooms develop into a useful size and the growth makes a stout, erect flower-stalk. For cutting it is invaluable.—D. B. C.

Chrysanthemum Sœur Melanie.—This fine old hybrid pompon has been very fine during the past fortnight in the open border, and within the same period several instances of its beauty have been seen in the cottage gardens a little way removed from the

London smoke. The plant possesses a robust constitution, is also fairly dwarf, and without being disbudded produces charming blossoms for cutting, comparing favourably with many of the newer kinds. Catalogues describe the flower as pure white, but grown in the open the blossoms are slightly tinted brown.

Pompon Chrysanthemums.—The rage for large blooms of Chrysanthemums still continues, and as a result of it the pretty little pompon varieties are often disbudded to such an extent that much of their true character is lost. This feature was very noticeable at the recent Aquarium show both in the case of cut flowers and of specimen plants. One of these latter—Sœur Melanie—was so severely treated, that the blooms regularly disposed over a formal specimen were far too large to be regarded as pompons, and in beauty they did not compare with those of the same variety grown in a more natural manner.—F.

Chrysanthemum Mrs. Mease.—Of the three members of the Mme. Carnot family, the variety under notice has done exceedingly well this season, and from a practical point of view probably more flowers of typical form have been seen of this variety than of either of the other two sorts. Reports have been current of the large number of buds which have failed of both Mme. Carnot and G. J. Warren, but of the lovely pale primrose blossoms of Mrs. Mease little news of failure has been heard. It is the most refined flower of the trio, and for the second time has been selected as the best Japanese bloom in the great show of the National Chrysanthemum Society.

STOVE AND GREENHOUSE.

THE NIGHT-FLOWERING JASMINE, OR DESERTED SWEETHEART.

(ARABICE, EL MAHBUBEH EL MATRUKEH.)

AMONG the many interesting tropical trees and shrubs introduced into Egypt during the time of H. H. Ismail Pacha there is one which seemed to have almost, if not quite, disappeared from cultivation when it was re-imported from India a few years ago by Mr. G. B. Alderson, of Ramleh, in whose garden it flowers annually at this season. The botanical name is *Nyctanthes Arbor-tristis* (L.), and it is nearly related to the Jessamine, especially the *Jasminum Sambac* of our gardens. It is much cultivated in the East Indies and Burmah for its honey-scented flowers, which are also used in dyeing.

In describing this small tree or shrub in his "Flora Indica," 1832, Dr. W. Roxburgh says:—

Of what country this is a native I know not, for I have never found it but in a cultivated state, and it is always raised from seed, which may be the reason we have no varieties of this most delightfully fragrant plant. In our Indian gardens it is found in the state of a large shrub or small tree. It flowers on the coast nearly all the year round, but in Bengal only during the rains. The seeds ripen in the cold season.

Dr. Wallich says he found it in an apparently wild state near the banks of the Irrawaddy on the hills near Prome. It delighted the celebrated Dutch traveller, John Hugh Linschoten, who published an account of it with a quaint plate exactly 300 years ago in his book of travels into Portuguese India, annotated by the well-known botanist of that day, Bernard Paludani. Linschoten's description is in Latin, of which the following is a translation:—

The sad tree.—A tree which is called "sad" because it only flowers by night throughout the year may be reckoned among the marvels of Indian vegetation. Even at sunset no flowers appear, but soon after the expiration of half an hour it is conspicuous for the beauty of its numerous blossoms, which fill the nostrils with their sweet odour. With the rising sun these flowers fall off and the ground is quickly covered with them, as it were in grief at the demise of the tree; the latter, reviving again in the evening, proceeds to flower and lose its flowers alternately by night

and day through the year. It is of the size of Plum tree, and much in request in the vicinity of houses for its fragrance; it is of great vitality, as even if cut down to the ground, after six months the shoots will be covered with flowers, and if a branch is pulled off and inserted in the ground it will forthwith proceed to flower and shed its blossoms. The flowers are like those of the Citron, but their tubes (eyes) are reddish yellow; they are used in the same way as saffron both for dyeing and cooking; not that they are of equal value or flavour, but they take the place of saffron when the latter cannot be procured.

Dr. Paludani adds to the above that—

Many persons consider that the distilled juice of the flowers is good for affections of the eyes if folds of linen are dipped in it and then applied to them. "This tree," continues Linschoten, "is only found in Goa, Malacca, and other places where the Portuguese have planted it about their residences. It was, without doubt, first brought to India from Malacca. It is not found in the interior."

In the Malay language it is called Singady, and by the inhabitants of the Deccan, Parisatico or Pul, by the Arabs Guart, and by the Persians and Turks Gul. They explain the origin of the name by the following Indian legend:—

There was a certain nobleman named Parisatico whose exceedingly beautiful daughter was wooed by the sun, and when, dazzled by his charms, she had surrendered to the importunity of so glorious a lover, she was basely deserted by him for another damsel of whose beauty he had become enamoured. Hence the grief of the deserted one, who in a fit of sad despair put an end to her own life. The corpse was placed on a funeral pile and consumed by the flames. They positively assert that this tree sprang from the ashes of the betrayed beauty, and that, in token of her grief and indignation, it sheds its flowers with the rising sun and closes its petals, preferring to exhibit its testimony of ceaseless weep during the gloomy hours of night.

The inconstancy of the moon is a favourite theme with western poets; but here we have a favourite plant of a "Peuple de l'Orient" as their emblem of the fickleness of the sun. The Portuguese made many attempts to cultivate the "sad" tree from seed in Europe, but never succeeded, and Dr. Paludani says that he had no better luck with the seed brought to him by Linschoten. Dr. l'Ecluse (Clusius), who was at that time director of the Botanic Garden at Vienna, and the most distinguished botanist of the day, thought that the falling off of the flowers at sunrise might be caused by the poverty of the juices of the flower which the rays of the sun dried up, as he noticed that these flowers which were least affected by the sun lasted longer than the others.

The climate of Alexandria is probably the northern open air limit for the growth of this tropical tree; here it flowers only once a year, and during the month of October. There is another tree, introduced into Egypt by Ismail Pacha from the Straits of Malacca, but since disappeared, which has the same habit of flowering by night and shedding its blossoms in the morning—*Barringtonia speciosa* (L.)—known to our Singapore colonists as the Painter's Brush, from the appearance of the flowers before they expand; these consist of four white petals and a great number of stamens about 4 inches long, the inner half of which is coloured white, the outer half rose-coloured and the anthers bright gold. The stamens are closely packed together before the flower expands, but after sunset they radiate outwards in a circle, having somewhat the appearance of a huge Passion Flower, but more beautiful. After sunrise the ground is strewn with these splendid flowers which have

a delicate scent. The tree is handsome, with evergreen leaves as large as those of a Cabbage. *Alexandria.* R. M. B.

Ruellia macrantha.—This is to a great extent a neglected plant, for it is one of the prettiest of warm greenhouse or stove species, yet not by any means popular. The propagation is easily effected by cuttings, which require a little bottom-heat to root freely, and as soon as struck may be potted singly and grown on in plenty of air and light in the stove. Frequent pinching in a young state is advisable to cause a branching habit, and the flowers will occur freely towards autumn in bunches at the leaf axils. The colour is a pretty bright red with white stripes.

Curculigos.—The value of these plants is often overlooked, and Palms being so cheap and plentiful they are in danger of dropping out of cultivation altogether. This would be a pity, as there are several very handsome species, notably *C. recurvata*, which, though not so well able to stand drought and ill-treatment as some of the hardier species of Palms, is very useful for house decoration. Curculigos are easily propagated by division and removal of the young growing points with a few roots attached, potting these up singly and placing over a little warmth. The compost should be substantial and a liberal water supply afforded while growing.

Hedychium coronarium.—White and fragrant flowers are always in demand, especially when, as in the case of this pretty Ginger-wort, they are produced in a dull season. Its culture is not difficult provided sufficient warmth can be maintained, but nothing like a dry atmosphere is likely to be productive of good results. If the temperature and abundance of atmospheric moisture are well kept up, then progress is rapid from the time the plants commence to grow. The plant should be rested a little in winter and started in spring. The compost may consist of equal parts of loam and peat, with a liberal admixture of half-decayed cow manure and a sprinkling of sand.

Rivina humilis.—Many people grow this pretty berried plant in far too much heat and heavy shade, the consequence of this being that the berries fall off with the least disturbance and the leaves fall early, leaving a half bare-looking plant. I saw a nice batch recently that had been brought on slowly in a cool greenhouse with barely any shade, and these were very pretty and useful, the berries of good colour and so firm, that a vigorous shake was necessary to make them fall. This untidy habit is the only fault of the plant, which is one of the most graceful and pretty in cultivation, and if it can be partially overcome in this manner it is worth doing.—C.

Imported Liliu auratum.—The first importation of *Liliu auratum* this season was disposed of in the London auction rooms on November 8, and though limited in numbers, they were in a very satisfactory condition, better, I think, than the first importations have been for some seasons past. They appeared to have been better ripened previous to packing than the earliest ones sometimes are, as many of them are often unsatisfactory; indeed, two years ago a great many of the first consignment perished completely. As comparatively few were offered on November 8 and the bulbs were plump and sound, they realised of course good prices; still, for all that, I much prefer the later importations, which are generally sounder and heavier than these early ones.—H. P.

Carnation Miss Audrey Campbell.—As recently stated, yellow Carnations that will bloom during winter and spring under pot culture are the scarcest of all. Those, however, who like the colour and wish for a supply in winter should grow Miss Audrey Campbell either in pots from

infancy or lift plants from the open border in, say, September and pot up. A lady living in North Wales wrote me last week, stating that she had lifted this variety from the open garden, and the plants are now laden with partly expanded and smaller buds. Perhaps the best thing to do in the case of border plants would be to keep the majority of blooms picked off during the ordinary flowering season, or say up to August. One of the best features in the character of Miss A. Campbell is its continuous habit of flowering. I remember Mr. James Douglas telling me, several years ago, that he had had it in bloom all the winter. Its form, size and colour are excellent.—N. N.

Berried plants at Chrysanthemum shows.—Some Chrysanthemum societies have a much more varied schedule than others. By this I mean the inclusion of subjects other than Chrysanthemums. Some now have a class for Violets, which is generally well filled, the fragrant exhibits affording much pleasure to visitors. Poinsettias, Primulas, and Orchids are likewise included. There is, however, another class of plants worthy of representation at such meetings,

with plants of the Begonia. The flowers remain fresh a long time, while the golden tuft will continue effective long after the petals have dropped.—H. P.

GARDEN FLORA.

PLATE 1250.

SEEDLING VERBENAS.

(WITH A COLOURED PLATE OF V. ELLEN WILLMOTT.*)

If the Verbena is to regain its lost popularity it will probably be through the medium of good strains of seedlings. Several new named kinds have recently appeared, and some have been certificated, this fact being considered an augury of returning popularity, but the same diseases and the same causes that carried away the good Verbenas of days gone by will again appear and have a like effect. The difficulty



Dicksonia antarctica in the open air at Penjerrick. (See p. 413.)

namely, the berried section. A class for Solanums would be sure to be well represented, and what more showy when well grown and fruited? Then the pretty brilliant berried *Rivina humilis* would not lack admirers, having a grace and beauty all its own. Well-berried bushes of *Skimmia japonica* and other varieties would also prove very effective.—J. C.

Begonia Aigrette.—This distinct form of *Begonia semperflorens* was recently illustrated in the French journal *Le Jardin*. It was exhibited at a meeting of the Horticultural Society of France and attracted a good deal of attention. This particular variety originated from seed of *B. semperflorens atropurpurea*, of which in foliage and habit it is an exact counterpart. The distinguishing feature is the male blossoms, the centre of which is filled with a dense globular mass of staminal segments of a brilliant yellow tint, thus forming a striking contrast to the red petals and deeply tinted foliage. This variety is said to have been proved for two years in the open ground during the summer, when in a mass the yellow portion of the flowers presented the appearance of *Calceolaria* blossoms intermixed

lies not so much in summer culture as in winter preservation, when fungoid and other insect pests infest them and debilitate the stock, which thus becomes useless either for propagation or subsequent planting out. All this evil can be avoided by relying upon a fresh stock of plants raised each year from seed. If those who are trying to popularise and improve the Verbena would work with a view to securing good strains in distinct self colours of kinds that could be raised from seed, and be relied upon to come fairly true, their labour would be better rewarded. In many gardens we have seen excellent batches of Verbenas, as healthy and free blooming as the most fastidious could desire. The plants were raised from seed, which is sold

* Drawn for THE GARDEN by Mrs. Hensley in the gardens at Warley Place. Lithographed and printed by J. L. Goffart.



VERBENA ALBA WINDY

in separate colours, and these from the seed in question proved very true in colour and habit of growth. At all times healthy seedling plants have an immense advantage over those propagated by cuttings from a stock which has been coddled, and is perhaps debilitated and diseased. There is no reason why the Verbena, like Asters, Stocks, and other things, might not be improved in this way and rigidly selected until we have distinct strains rich in all the variety of hues characteristic of the flower producing seed, which saved with care and in separate colours might be thoroughly relied upon. There is no need whatever for naming different kinds,

garden, where Verbenas grow particularly well. One year I noticed among them an unusually large flower of a beautiful shade of pink, and seeing that the plant itself was very vigorous and that the duration of its flowering season was beyond the average, and that it was even more free-flowering than other Verbenas, I propagated exclusively from it. Now the stock is practically unlimited, and I give away many thousands of plants every spring.

THE WEEK'S WORK.

KITCHEN GARDEN.

SALADING.—At this time of year, and indeed till spring, salading in its varied forms is in great

ball as possible, as this makes all the difference. In regard to watering, it is best to soak the balls to settle the new soil round them after a few dozen have been laid in, as then the foliage can be laid on one side and the water prevented from going into the centres. Many blanch Endive in the Mushroom house, a very convenient way, but in my opinion the leaves are never so crisp and enjoyable as when treated to a comparatively cool place. Where Chicory is esteemed, a batch of roots may be introduced into the Mushroom house at the end of the month, Dandelion being served in the same way. If these various subjects are used say alternately, they make a very pleasing change in the salad bowl. All younger batches of Chicory that are left in the open border must not be neglected, or severe frost following soaking rains may work irreparable mischief. Nursery beds of Lettuce, such as All the Year Round and Hardy Hammersmith, which according to previous advice have been surrounded with boards furnished with cross-bars, must be covered with mats or canvas every evening if the weather looks in the least threatening. There is nothing better than dry leaves for protecting rows of Brown or Hick's Hardy Cos Lettuce at the foot of south or west walls, this being proved after severe weather by the frequent green, fresh-looking condition of plants which have been accidentally covered with them, others unprotected by their side being very often damaged or destroyed. The chief thing to be observed in the management of all kinds of salads in the frame-yard at this particular date is careful ventilation. It is always best to keep the lights continually tilted over the Endive frames in order to preserve the leaves in a dry condition, as if laid in soil close to the glass, 10° or 12° of frost will often work mischief when the centres are wet. Lettuce planted in October, likewise Cabbages in frames, will now be all the better if the soil is stirred with a small rake, giving afterwards a sprinkling of soot or soot and wood-ashes, as in wet or damp weather slugs are always troublesome. Remove dead and yellow leaves at short intervals and avoid coddling, or indeed covering of any kind, unless the weather is unusually severe.

HOTBED MATERIAL.—In gardens where early Potatoes, Peas and Carrots are expected early in the new year it will be advisable to commence to get together such material as good Oak or Beech leaves, stable litter of a somewhat long character, and, indeed, any loose littery garbage from the general rubbish heap, as it is astonishing what a quantity is needed for building up a good-sized hotbed capable of accommodating several two- or three-light frames. The beds will not be made up at the earliest before the middle of December, but as a general rule leaves and litter are only forthcoming piecemeal, and ample time is necessary for accumulation. Where shed room is at command it is likewise expedient to remove under cover a liberal quantity of suitable material for planting and sowing these early forced vegetables in, as it is most uncertain what the weather may be like when the time for the work arrives, and nothing is so hindering or detrimental generally as cold, sticky compost.

PEAS IN POTS.—December will very soon be upon us, and where early dwarf Peas are grown in pots preparation must soon be made. William Hurst, Chelsea Gem, American and English Wonder are all good for the purpose. Use 10-inch pots and a rich, open, loamy compost. Road scrapings are excellent as a corrective in pot Pea culture, also a sixth part well-decomposed manure. It is not wise to exceed this quantity, or a sappy, unsatisfactory growth will follow, and it is always an easy matter to apply artificial manure later on. Allow a good margin for water and earthing up when the haulm is some 3 inches high. Give good drainage and a light, airy position near the roof-glass, and if possible not far from the ventilators. Do not exceed a night temperature of 45° for the present, nor give much water till growth appears well above ground, or the seed will be liable to decay.

J. C.



Arundinaria nobilis at Penjerrick. (See p. 413.)

which, so far as the Verbena is concerned, only tends to limit its culture; moreover, in the newer and finer forms of Phlox Drummondii we obtain distinct strains in separate colours, which in their way are equally as good as Verbenas, yet we do not trouble to name them. The giving of separate names is too frequently adopted, and could easily be dispensed with in many families of popular garden flowers.

Miss Willmott, of Warley Place, who raised the fine variety we figure to-day, says:—

I used to raise several thousand Verbenas from mixed seed to plant a long bank in my Tresserve

demand, and it behoves gardeners to preserve intact any surplus batches of Lettuce and Endive which were left on the borders when the pits and frames were filled, as it seldom happens that there is any too much left in those structures in March and April, particularly after a severe winter. Those possessing a Peach case or orchard house may well utilise them for accommodating both Lettuce and Endive. With a free and constant circulation of fresh air damp will cause very little trouble. In this position it is an easy matter to blanch them piecemeal by darkening the plants with flower-pots when not laid in too closely, or by laying one or more garden mats, or even sheets of brown paper, over them. Of course, any plants so housed must be used first, as at the approach of spring, tree cleaning and surfacing will necessitate a complete clearance of everything from the house. When lifting, secure as good a

FRUITS UNDER GLASS.

POT STRAWBERRIES.—Probably by the time these notes appear a reminder that winter is at hand will have come to us in the shape of moderately sharp frosts, warning us that those things which require winter protection of some sort must soon be attended to. I am no advocate for wintering pot Strawberries under glass, as I find that the crowns are best suited by exposure, but the roots require something more than the pots to preserve them from injury in very frosty weather. Having tried almost all the various ways recommended for wintering the forcing Strawberries, I have come to the conclusion that plunging the pots in ashes quite up to the rims is the best way, and gives them as nearly as possible the conditions they would be under if planted outdoors. Ashes protect the pots, and it requires more than the frost of an ordinary winter to do either them or the pots any harm provided they are sunk quite to the level of the bed. Stacking the pots is a worse method in more ways than one, for the pots do not protect each other nearly so well as do the ashes, and, for another thing, the soil in some of the stacked pots is very liable to become drier than the roots like it to be. For the latter reason I also object to bringing the plants under glass to winter, as the drier conditions of even cold houses or frames prevent the uniform moisture which, as I think, the plants enjoy, provided the pots have been well drained, and these conditions are not to be attained through the use of the water-pot, no matter how carefully it may be used. Again, it is well known to those who have to force almost any kind of crop early that frost provides the one thing needful for a kindly start, and unless they get it they are difficult to move, and this applies quite as much to Strawberries as it does to our Seakale, Rhubarb and other things. Bringing them under glass at this early date, or, indeed, before it is really necessary to do so, though it may be the easiest way of dealing with them, deprives them of the undoubted advantages they gain by being subjected to frost. All that is necessary is to bring them under cover soon enough, before starting them into growth, to allow the surface to get dry enough to bear the ramming which may be necessary, and this must not be done when the soil is wet. Of course, those batches which are to be started almost immediately need not be plunged, and will be all the better for full exposure to the weather right up to the time when they must be brought in, as we rarely get frosts of any great severity much before Christmas.

FIGS.—Pot Figs which were brought into their forcing quarters as suggested a week or two ago will now show signs of being on the move, and should be plunged in some of the fermenting material—leaves and manure, or leaves alone—which has been in the course of preparation during the past few weeks. Take care that this material is not too hot and that the temperature does not rise rapidly after the pots are plunged. Leaves alone rarely do this, but I like to have a little stable litter mixed in for the sake of the ammonia given off, and which always appears to impart a healthy growing atmosphere to the house. The amount of care necessary to attain success with hotbeds is really very little, as it is very easy to reduce the temperature when it rises too high by making a few holes in the bed. These need not be large, but should be deep enough to get well below the centre of the bed, as it is this middle portion which becomes hottest. After the holes have been open for a day or two, the material pulled out may be again returned. For testing the temperature, a few test pegs—strong pointed stakes—should be pushed well down into the bed here and there, and if these are drawn out and felt at intervals of a few days, it is easy enough to detect and regulate any immoderate fluctuations of temperature. Remember that in forcing at this time of the year, slow and steady should be the order of progress. Use the syringe in moderation, and in its use be governed by the state of the weather outside and by the chances afforded for ventilation, as excessive humidity of

the atmosphere is really harmful to the Fig during the winter season, and tends to the production of flabby leaves that cannot resist the attacks of rust. Take care that the roof-glass is clean and bring the plants as near to it as possible. Rather low span-roofed houses, with a good big centre bed for the trees, are the best and most convenient style of house for pot Figs. Whenever the weather is at all fit and sharp draughts can be excluded, a little air should be given daily, but beware of having both top and bottom ventilation on at the same time unless the outside air is unusually mild and still. Generally speaking, top ventilation is the safest, and this should be given on the leeward side of the house. The minimum night temperature may now be raised to 60°, with the usual rises by day and with sun-heat.

ORCHARD HOUSE.—The Chrysanthemum season will soon be on the wane, and where the orchard house has been devoted to these plants for the past month or two, the earliest opportunity should be taken of clearing them out so that the house may be washed down and put in order to receive the trees. Of course it will not be necessary as yet to bring in the trees unless they are wanted for forcing. Still, it is more convenient to have them at hand in order to carry out any repotting or regulation of the drainage if these operations were not carried out as recommended soon after the fruit was picked and before they were taken into the open. Other advantages of having them under cover are that they may be kept drier at the roots and that they are safe from the attacks of birds on the buds, as a pair of bullfinches would very soon strip all the flower-buds from a set of pot dessert Plums, of which they are particularly fond, and they are capable of doing much mischief without being observed. While writing of these mischievous birds it may be as well to point out that, contrary to the generally received opinion, they do even more damage in mild weather than they do when it is frosty, so there should be no false idea of security up to the time when winter sets in. Where any of the older pot trees are getting unwieldy or unhealthy, they should be replaced with some new stock. The present is a good time to secure such from the nurseries, and in choosing them make sure that they are on clean stems at the point of union between stock and scion, also that they are well set with fruiting-spurs and healthy, though not gross, in growth. Nursery trees frequently want potting when they are bought in, and in any case it is advisable to examine their roots, potting those which need it and regulating the drainage of those which seem capable of going through another season in their present pots. Do not give large shifts, and see that the potting mixture contains plenty of porous material in the way of mortar rubbish; also remember that firm potting and planting lay the foundation for good fruiting wood. Keep the house for the present fully ventilated, even to the extent of admitting a few degrees of frost, as this will do good to the trees, but do not forget to empty the hot-water pipes, if any, or if this is inconvenient, sufficient heat must be kept in them to keep up circulation of the water to prevent them from bursting if the weather turns severe.

VINES.—The greater portion of the pruning should take place before Christmas, even though the Vines are not to be started for some months, for there is no need for further delay when the crop is off and the leaves fallen. Early pruning relieves all anxiety as to bleeding, and there is then no need for using styptic. Most Vines may be pruned as recommended for Black Hamburgh a week or two back, but Gros Maroc, Gros Guillaume, and one or two other coarse-growing varieties do best when pruned on the long-spur principle. In shortening back any young rods which may have been run up, do not be led away by the wonderful reports of Vines which have filled their allotted space at express speed and given heavy crops. I do not doubt the facts, but such Vines do not last long and are not suited for private places, where the clearing out of a vinery

means a sad gap in the supply. Of course, where houses are plentiful this gap would not be much felt, but if we require Vines that will live and bear good crops over a long period they must be built up gradually, and young canes must be cut back at each pruning beyond the point where the pith is large and the wood on the soft side. Progress may be slower in this way, but there will be less trouble in the end. Continue thoroughly cleaning both Vines and houses, especially the houses, as fast as opportunity arises.

CORNUBIAN.

OCTOBER IN SOUTH DEVON.

THE autumnal tints of the past month have been particularly varied and bright, and have entirely eclipsed the October display of the three years immediately preceding. Last year, indeed, the leaves had scarcely commenced to change colour by the end of the month, and it was not until December that the Elms in the valley showed their brightest yellow in the scanty remnants of foliage that had not fallen. This year, however, many of the Elms are already almost bare of leaves, and the woodland glows with its pageant of daily shifting tints. The Beeches' ruddy copper flames afar; the Spanish Chestnuts gleam in robes of amber, orange, and russet; the Scarlet Oaks flaunt their brilliant hued foliage; on cliff face and house wall the Virginian Creepers spread their crimson mantle; the Vines show wondrous tints of purple, bronze, and maroon in their symmetrical leaves, some of which glow with a rich scarlet when the rays of the setting sun fall athwart them. In the garden many of the shrubs and trees, such as the Sumachs, *Koeleruteria paniculata*, and *Amelanchier*, are particularly decorative at this season of the year. A spreading specimen of the *Amelanchier* standing on a lawn backed by a magnificent Cedar of Lebanon created a lovely picture in mid-October. In the hedgerows there is a marvellous profusion of berries this autumn. The wild Guelder Rose is bright with its clusters of crimson fruits that look like large semi-transparent glass beads. Now that the high Hawthorn hedges are for the most part denuded of their leaves, the long lines are flushed deeply red with the innumerable haws that stud so thickly the thorny twigs. Here and there is a spot of brighter colour where the scarlet haws of Dog Rose or Sweet Brier gleam a vivid scarlet, or the berried Bryony hangs its tangled skein from the straggling hedge. The Holly is bearing a multitude of berries such as has not been seen for many a year, and in consequence predictions of a severe winter are to be heard on all sides. Very pretty are the effects produced by the large Holly bushes standing up from the hedgerows with their countless clusters of vivid tinted berries thrown into high relief by the sombre foliage, while now and again a charming picture of natural artistic grace is provided where some tall bush is festooned with the wreathing, smoke-grey trails of the Traveller's Joy (*Clematis Vitalba*), between whose feathery seed-vessels the scarlet berries gleam and the dark green polished leafage shows. Early in the month along the verges of copse and spinney the coral-pink Spindle-wood berries displayed their soft colouring, but these trees, curiously enough, contrary to the case of almost every other berry-bearing subject, in most instances fruited more sparingly than in former seasons in this immediate neighbourhood.

In the shrubberies the Barberries have been very attractive with their slender arching branches thickly strung with clusters of small bright red tubular fruit, and the Ivy garlanding old tree trunks and ancient masonry has been daily murmurous with the host of insect life that has haunted its blossoms. Early in the month a few slight frosts played havoc with the Dahlias and Heliotropes in some gardens, but in others no damage was done, and these at the present time contain Dahlia plants no leaf on which shows a suspicion of frost-bite. This year the title applied to the week in which St. Luke's Day occurs of

St. Luke's summer has been no misnomer, for from one day before to seven days after that date the weather has been warm, still, and rainless, and the fair sprinkling of martins and swallows that still remained with us seemed justified in their tardy departure, though the rain and wind that set in after this spell of halcyon weather must have rendered them dubious as to the wisdom of their late stay.

Sheltered gardens that have not been touched by the frost have exhibited a fair amount of brightness throughout the month, in the early days of which the giant spires of the *Acanthus* were still decorative. *Achillea ptarmica* fl. pl. The Pearl has not ceased producing its small double white flowers, and the Sweet Alyssum yet clothes a high bank with its honey-scented blossoms. *Anemone japonica alba* Honorine Jobert has bloomed throughout the month, and the flesh-pink variety has been especially noticeable in many cottage gardens. Though inferior to the white form both for indoor and outdoor decoration, it is of a pleasing shade of colour and entirely lacks the crude tint of the type. At the commencement of October many of the *Belladonna* Lilies were still in bloom, but the flower *par excellence* of the month was the

Starwort, or perennial Aster. Exquisite colour-schemes are afforded by a collection of these subjects on a bright and still October day, the soft hues that melt suavely into one another and the varied heights of the plants completing a picture in which the beauty of distinct form is enhanced by harmonious tints. Staking is a necessity in the case of the taller Starworts, or their branches will be levelled to the earth, especially if their leaves be wet, by the first storm, but this operation requires to be carefully undertaken, or the effect produced will be the reverse of artistic. In many cases the process of staking is not taken in hand until the plants are in flower, when a large stake is driven into the centre of the clump and the flowering growths tied tightly to it. Such a method of procedure, which may well be termed "torture at the stake," effectually destroys the natural grace of the plants, which with their bunched-up flower-heads, some turned inward and some outward, present the appearance of a sheaf of corn instead of exhibiting the characteristic elegance that is the feature of their slender branching flower-sprays. The central support should be inserted into the clump before the plants have quite completed their growth, and several green-painted Bamboo canes of a suitable length firmly fixed, with a slight outward inclination, around the circumference of the clump an inch or so within the outermost shoots. These canes can be loosely looped together with tarred twine, and connected here and there by the same material to the central stake. Treated in this manner the plants retain their natural grace of contour, while the staking is practically invisible, and are enabled to withstand all but exceptionally severe gales without any impairment of their ornamental qualities. Of the tall Starworts, the most effective has been *Aster Novi-Belgii* Robert Parker, the tall branching flower-sprays, often 6 feet and more in height, set with pale mauve, golden-centred stars that are not so crowded as to detract from its graceful appearance. *A. puniceus pulcherrimus* is another handsome plant, attaining under favourable conditions a height but little inferior to that of the last-named variety. Its flower-shoots are, however, of far robust growth and their side sprays shorter, while the blooms, that are of palest mauve, turning to white, hide the shoots in their profusion. *A. N.-B. Harpur-Crewe*, an early-flowering white variety, had lost its beauty at the commencement of October, but the later blooming whites, *niveus* and *polyphyllus*, were decorative for a longer period, while the dark, purple-blue *A. N.-B. Archer-Hind*, with *A. N.-B. Pluto* and *A. N.-B. Flora*, both dark-flowered varieties, retained their blossoms well through the month. *A. Amellus bessarabicus*, the first Starwort to expand its flowers, continued to bear its large purple-blue,

golden-centred blooms, and the white *A. cordifolius* and its lilac-blue variety, *A. c. elegans*, bore their spreading branches thickly studded with diminutive flowers, while the little *A. ericoides* produced its tiny white Daisy-like blooms, and the old cottage favourite, *A. diffusus horizontalis*, its small maroon and white flowers. Of the *Novæ-Angliæ* section, the purple *A. N.-A. Melpomene* and the rosy *A. N.-A. ruber* have been effective, while *A. grandiflorus*, the latest of all the perennial Asters, was in fine bloom in mid-October. Its large deep purple flowers, with their bright yellow centres, render it a most decorative object when in full flower, but its lateness makes it unfitted for planting in situations not conducive to early maturation, since the advent of frost before its blossoms are fully expanded prematurely terminates its display. In the colder districts it should be valuable as a pot plant for the conservatory or cool greenhouse. *Aster* (*Chrysocoma*) *Linowsyris*, colloquially known as Goldilocks, was still in flower at the commencement of the month. The

Tuberous Begonias, although creating a less gorgeous display than in the preceding month, were still bright during the opening days of October, and the large-flowered *Cannas* had not entirely ceased to display their brilliant blossoms, while *Canna Ehmanni* iridiflora yet held here and there a drooping flower-scape of cherry-pink. *Campanula carpatia* and other of the dwarf Bellflowers produced a few blossoms, and the *Marguerite* Carnations bore many a flower amid the blue-green leafage. The *Valerian* (*Centranthus ruber*) has borne in diminished numbers its heads of bloom, pink, white and red, and the early *Chrysanthemums* were still in evidence at the beginning of the month, while towards its close the later varieties commenced to expand their blossoms in the open garden. The

Autumn Crocuses (*Colchicum*) have been blooming well, being especially decorative when their leafless blossoms were afforded the setting of mossy bank or verdant lawn. *Coreopsis grandiflora* continued the display of its single golden blossoms through the greater part of the month, and *Cosmos bipinnatus* produced its white and pale flesh-coloured flowers. There is also a darker tinted variety of this flower, its magenta-like hue, however, rendering it particularly undesirable for use either in the garden or for indoor decoration. These subjects should not be planted in soil that is rich and deep, or they will make growth at the expense of flower-production until the autumn is well advanced, and in this case early maturation is desirable. *Crinum* have continued to flower throughout the month, *C. capense*, *C. Moorei*, *C. M. album*, *C. Powelli* and *C. P. album* being all represented in different gardens. The *Cactus Dahlias* have also prolonged their display where they have not been cut by the frost, and now and again the *Delphiniums* manifested their presence by a tall light blue flower-spire, and the annual *Larkspurs* have not entirely lost their brightness, while *Doronicum plantagineum excelsum* Harpur-Crewe has borne a sufficiency of widespread golden stars to fill an occasional flower vase, though not materially contributing to the brightness of the garden. The *Mexican Daisy* (*Erigeron mucronatus*) is still in flower, and *E. speciosus* exhibits a few mauve golden-eyed blossoms, relics of a prolonged blooming period, while at the commencement of the month the *Coral Tree* (*Erythrina crista-galli*) in a late garden was displaying its crimson flower-spikes. The great *Fuchsia* bushes are in many cases still bright with blossom. *Gentiana acanthis* shows a fair sprinkling of deep blue blossoms, here and there *Geum coccineum* gives a spot of bright colour, and the *Water Aven* (*G. rivale*) in a corner of the wild garden is bearing its buff flowers. *Gaillardias* are bright with their crimson and gold, and in warm borders the orange of the *Gazania* shines with little diminished splendour. On southern rockeries the *Sun Roses* (*Helianthemum*) have expanded a few bright blossoms, and the perennial *Sunflowers* have sustained their display of gold throughout the

greater part of the month, *Helianthus latiflorus*, *H. rigidus* Miss Mellish and *H. giganteus* being the most decorative, while the *Jerusalem Artichoke* (*H. tuberosus*) in kitchen gardens has been flowering freely. Now and again *Helichrysums* were to be seen in flower, and towards the close of October the giant *Christmas Rose* (*Helleborus altifolius*) produced the first of its white chalcices.

Hunnemannia fumariæfolia has been bright with its yellow blossoms, and early in the month the *Hydrangea* bushes were still ornamental with their massive blossoms ranging in colour from Forget-me-not blue to bright pink, while *Hypericum Moserianum* was bearing a few of its yellow flowers. Before the conclusion of the month the lovely *Algerian Iris* (*I. stylosa*) had commenced its lengthened period of bloom, in open winters its fragrant blossoms being produced continuously until the end of April. In porous soil in the south-west, especially if planted in a sloping bed, this *Iris* increases at a particularly rapid rate, two or three tubers forming an immense clump in a few years' time. The *Torch Lilies* (*Kniphofia*), though failing to maintain the extent of their earlier display, have in many cases borne their vivid flower-heads through the month. *Lobelia fulgens* had not lost the vermillion of its flower-spires in the early days of the month, and *L. rosea* still displayed the velvet-pink of its blossoms. The *Lily* of the Valley plants have produced an abundance of scarlet seed-berries, an event of rare occurrence in any but exceptionally dry seasons. Until the close of the month the *Corn Marigolds* were golden in certain fields, while the *French* and *African Marigolds* have contributed much to the brightness of the October garden. Late-sown seedlings of *Nicotiana affinis* are yet in bloom, as is *Oxalis floribunda resea*, while the

Tufted Pansies are far from flowerless. *Paris Daisies*, both yellow and white, were bearing a sparse scattering of flowers at the commencement of the month, at which period the *Ivy-leaved Pelargeniums* were here and there producing a few bloom-trusses, and the *Welsh Poppies* (*Meconopsis cambrica*) and *Iceland Poppies* (*Papaver nudicaule*) were displaying infrequent blossoms, while *Pentstemons* and herbaceous *Phloxes* were also continuing to flower. The *Winter Cherries* (*Physalis Alkekengi*) and the newer introduction *P. Franchetti* have borne their bright orange calyces, some of those of the latter variety being of large size, while the integument is of greater consistency than is the case in the older form.

Phygelius capensis remained in flower in a few instances until the second week of the month, and *Plumbago Larpenæ* made a charming picture with the maroon-bronze of its foliage almost smothered in the soft blue of its flower-heads. Not many months since this plant was referred to in these columns as a useless introduction, but, whatever may be its demerits in more northern districts, in the south-west and along the coast-line of Dorsetshire and Hampshire it is without doubt one of the most valuable autumnal bloomers. It spreads rapidly, in fact almost too rapidly, soon covering a large extent of rockwork if not rigorously kept within bounds and appears indifferent to soil, succeeding equally well in a heavy or light staple, while it may be seen flowering with equal freedom in a moist situation as in one that is dry and sunny. At the commencement of the month *Pyrethrum uliginosum* was still decorative with its lofty flower-stems of narrow-rayed, white stars, and *Ludbeckia purpurea* bore its ruddy blossoms, while *R. Newmanii* held its orange, black-centred blossoms through the entire month, as did the tall growing *R. nitida* its larger flowers of bright gold. Of

Roses there was no week when a bowlful could not be culled from the open garden for indoor decoration, even *Hybrid Perpetuals* yielding not a few brightly coloured buds and half-expanded blossoms that added variety to the collection, though *Chinas* and *Teas* contributed nine-tenths of the available flowers. The single white *Macartney Rose* has continued to produce its chaste golden-centred blossoms, which it has now

borne without intermission for over four months. This Rose is an excellent climber and soon covers a considerable expanse of wall, while its foliage is practically evergreen except when seared by severe frosts, while in the south-west it is useful for growing on pergolas and arches. *Salvia patens* had not ceased its display of rich blue in the opening days of October, when *S. fulgens*, *S. coccinea*, and *S. rutilans* were also in flower in the garden. *Scabiosa caucasica* is bearing its porcelain-blue flowers in the case of plants raised from seed during the present year, the Winter Flag (*Schizostylis coccinea*) displays its crimson bloom-spikes, and the glaucous foliage of *Sedum Sieboldi* is crowned with flat, mauve-pink flower-clusters. The so-called Winter Daffodil (*Sternbergia lutea*) has produced its golden, Crocus-like blooms in profusion. Very bright are these in the garden, while they are equally acceptable for indoor decoration. *S. macrantha*, a particularly fine species with far larger blossoms, was also in bloom at the commencement of the month.

Stokesia cyanea, a flower not unlike a single Aster in contour and colour, except that it lacks the yellow eye, was in full bloom early in the month, and in a sheltered spot in the open *Sparmannia africana* was bearing its white flower-trusses. In some gardens the Thrifts (*Armeria*) are displaying autumnal blooms, and the purple and white varieties of *Tradescantia virginica* are not as yet entirely flowerless. Violets in the open are in fine bloom, and those transferred to the pits at the end of September are fully established and promise an excellent winter supply of blossom. I have not as yet seen any individual single Violet flower to excel a well-grown specimen of Princess of Wales in size. *Zauschneria californica* has borne its scarlet tubular blossoms well into October, but has scarcely flowered so freely as might have been expected after such a sunny summer. Annuals, such as Stocks, Antirrhinums, Salpiglossis, Eschscholtzias, Zinnias, Cornflowers, and others, have materially contributed to the floral calendar of the month.

S. W. F.

ORCHIDS.

ARUNDINA BAMBUSÆFOLIA.

This is a little out of the ordinary run of Orchids and not at all a popular plant, yet it has many claims to attention. The pretty light green of the stems and foliage is always attractive, while the blossoms are very bright, and are produced, moreover, over a long season. These occur from the ends of the tall Bamboo-like stems, and vary a good deal in size. The sepals and petals are pale rose, with a deeper suffusion, while the lip has a fine deep purple front lobe, with lines of orange-yellow leading to a white throat. This *Arundina* is the only one at all likely to be seen in most collections, and, being a native of hot countries, it likes a position in a warm, moist house. As a rule it is relegated to a shady corner, but this is hardly fair to it, as though not liking bright sunshine, it requires a certain amount of light, especially during autumn and early winter, to properly consolidate the stems. Plants so treated are far more likely to flower freely than are those treated as above. The atmospheric moisture should be especially well maintained in order that thrips and red spider may be kept at bay. This will also cause the free emission of young shoots from near the top of the stems, such shoots being very useful for propagating. Like those of *Dendrobiums*, these small and vigorous shoots when placed half a dozen together in a pot make far more rapid progress than do pieces of the older plants divided up. Badly furnished specimens, too, may be improved by having these young shoots pegged down around the compost and allowed to thicken and grow up, removing a few of the older and worn-out

shoots annually. The roots of *Arundina bambusæfolia* are very freely produced and vigorous, liking an open and free but substantial compost, a good mixture consisting of equal parts of peat-fibre, loam, and chopped Sphagnum Moss with abundance of large lumps of charcoal or burnt clay to keep all open. Many growers use sand, but I could never see any advantage in using this material for terrestrial Orchids. It has a tendency to reach the drainage and clog this, and, except when of the best and coarsest quality, has not much value in opening the compost. Crock dust or pounded

old worn-out compost is removed, and any dead roots present should be cut away. Set the plants a little below the rim of the pots in order that water may be easily supplied and surface the compost with rough Moss. During the growing season keep the syringe going among the foliage and stems, but this must not be done in dull or wet weather. In winter a fairly moist house and a temperature of about 60° at night suffice.

Odontoglossum Schlieperianum citrinum.—A correspondent sends a nice bloom under



Phyllostachys nigra in the grounds at Penjerrick. (See p. 413.)

charcoal is a far better material according to my experience, being lighter and not so easily silted downwards by the continual watering as silver sand. In any case, and whatever is used, the drainage must be very carefully laid and there must be plenty of it, for the plants do not require very frequent disturbance at the roots and the latter need a good deal of water even in winter, the plant having no pseudo-bulbs to sustain it over a long period of dry rest.

When repotting, see that the whole of the

the above name, but I cannot see that it differs from the form that I have known for years under the name of *O. S. flavidum*. The brown spotting has entirely disappeared, and its place is taken by a few similarly sized blotches of a deeper tint of yellow than in the type. It is evidently from a well-grown plant, and very useful such varieties are at this time of year.—H.

Odontoglossum cristatellum.—In this pretty species, which unfortunately is not at all plentiful, the flowers are not unlike those of a small *O. triumphans* in colour. It has been said that it is a natural hybrid, though from what

species it would be difficult to say. It is of dwarf habit, and the flowers are produced on scapes about a foot high. The plant is a native of high Andean ranges, and, consequently, likes a cool and pleasantly moist temperature, rather small pots, and a position where ample ventilation is assured. It does not require a drying-off season.

Masdevallia calura.—This is a Costa Rican species, and a very beautiful little plant. The leaves are only a few inches in length, the flower-spikes bearing a single blossom only. The centre portion of the flower where the sepals are united varies a little in colour, beautiful shades of chocolate-red and purple, becoming paler at the margins and finishing in deep orange-yellow tails, being the usual tints. It is most like *M. Reichenbachiana*, with which species it is said to grow in its native haunts. It does best in medium-sized baskets of peat and Moss.

Brassavola glauca.—The pure white lip and greenish sepals of this Orchid contrast prettily, and altogether it is one of the best, if not the best, in the genus. It is of a *Cattleya*-like habit as distinct from the reed-like stems and foliage of many other species. A native of Mexico, it likes a moderate heat only and to be grown in baskets or on rafts, with a rather thin layer of compost. A little excitement in spring and ample light all the year round are necessary, as when grown in a shady house the plants often refuse to flower. The blossoms are produced singly from the top of the newly-formed bulb.

Lælia amanda.—This is usually supposed to be a natural hybrid, but whatever its origin it is a very beautiful Orchid, its large and showy blossoms having a refined and delicate appearance. These are each upwards of 4 inches across, the lip a little deeper rose than the rest of the flower, and having still deeper radiating lines upon it. It grows about 9 inches high, and each pseudo-bulb has a pair of leaves, from between which the flower-spikes issue. The best compost is a rough and open one, consisting of peat and Moss over good drainage, and the plants should be slightly elevated.

Paphinia grandis.—Although one of the finest in the genus, this is not a good plant to have a lot of in flower, for the scent of the blossoms is by no means pleasant. These are often 5 inches across, white, barred with brown and purple, and they precede from the last formed pseudo-bulbs. A native of Brazil, an intermediate or *Cattleya* house temperature suits it best, and the plant should be suspended near the glass if possible. The leaves cannot stand strong sunlight, but the plants do not flower freely in a dark house. Ample moisture should be given while growth is active, and it is very important that the compost be kept sweet.

Cypripedium Spicerianum nigrescens.—Although this cannot by any means compare with the type for beauty, it is an interesting plant and a remarkable variation. The lip has a pinched and puckered appearance and the dorsal sepal is not so fine, the former being of a dusky purple or black tinge. It does not grow so strongly as the type, which is now one of the brightest and most beautiful in the genus. It likes a good substantial compost with ample supplies of moisture while growing, a light position and plenty of warmth. Strong plants flower very freely and the blossoms last long in good condition.

Rodriguezia planifolia.—None of the *Rodriguezias* or *Burlingtonias* like a lot of compost, and one of the finest lots of plants I have seen was grown on blocks of teak wood with their ends in water, sufficient moisture ascending the blocks for the needs of the roots. But this method is rather too poor to be recommended in a general way, and a better plan is to nearly fill a basket with drainage and simply surface this with Sphagnum and a very little peat. Grown in this way, I recently noted this pretty species, which has rosy crimson flowers produced on short, but graceful spikes. The rather thick and hard leaves betoken a liking for a fair amount of

sunlight and air. They are very apt to be attacked by a soft white scale, and this must be carefully kept at bay if good results are looked for.—H.

Catasetum Christyanum.—The contrast between the bright emerald-green of the lip and the dull tints of chocolate and purple in the other parts of the flower is very marked in this curious species, and good spikes of it are very attractive. It is an easily grown kind with stout fleshy pseudo-bulbs and long pale green leaves, which for the most part fall away in autumn. Its culture may briefly be described as similar to that of the deciduous *Dendrobiums*, both liking a very strong, moist heat while growing with a good deal of sunlight; just as much of the latter, in fact, as can be managed without damaging the foliage. During this time the roots must be kept very moist, but when the flowers are past and the pseudo-bulbs complete, very little water is needed. During the winter months a temperature of about 55° at night is ample, and the plants must stand in full sun.

Odontoglossum Rossi.—If this pretty Orchid were worth a guinea or two a lead instead of being one of the cheapest in existence, it would be thought a great deal more of. As it is, it is certainly one of the prettiest of cool house species and also one of the most easily grown, a fact that should recommend it to beginners in their culture. It is a very variable species, and those who know one form would hardly recognise others as belonging to it, but all are strikingly pretty and very free flowering. Not being a large growing plant, the receptacles used for its culture should only be large enough to take the plants easily, allowing, say, 1 inch for compost all round. Equal parts of good peat fibre and Sphagnum Moss used over good drainage is the best compost, and the lighter the position the better for the plants. While not agreeing with cutting up this Orchid into very small bits, I am sure it is also a mistake to have too large plants of it, as these get bare in the centre after a few years. Plants large enough to fill 5 inch pots are big enough for all purposes.—H.

COOL ORCHIDS.

AMPLE light and a sweet, pure atmosphere are necessary for cool Orchids now, and a great deal of care is required in watering. The majority of the section of *Odontoglossums* to which *O. crispum* and its allies belong will be growing freely, and the roots should be by now working nicely in the new material supplied some time ago. The cool Orchid house at the back of a north wall is not, I think, so frequently built as formerly, and it is in the winter-time that the advantage of a more open and light position is most manifest. But in any case it is imperative that the glass be kept quite clean outside by frequently washing it down and inside by syringing. The plants, too, in a number of instances are arranged too far from the glass, and may, by elevating on inverted pots, be brought much nearer to it. The plan of arranging these with the smallest in front near the path in span-roofed houses is a very bad one, and just the opposite conditions are right, though a little more trouble in watering is inevitable. Such things as large plants of *Maxillarias*, *Lycastes* and *Anguloas*, although they like light as well as any, do not suffer in the same ratio as small bits of *Odontoglossum* and *Oncidium* if kept further from the glass, so this ought to be kept in mind when staging.

Respecting the watering referred to above, I like to see the small plants occasionally dry, for a plant always kept wet, or even moist, never seems to root with so much vigour as one that is allowed to look for moisture a little. But to go to the other extreme and let the young growth suffer from want of it is just as injurious. When the Sphagnum begins to look a little white it is usually time to water the roots, and it is not wise in every case to wait for this. The cool house is often used for resting quarters for *Dendrobiums* of the deciduous section, but whatever is done in

this way must be secondary to the needs of the bona-fide inhabitants of it, and to crowd the glass with baskets, keeping the light from these, is a great mistake. Again, it is necessary to see that the *Dendrobies* are clean before bringing them in, red spider or thrips being often introduced in this way, and these are difficult to eradicate. A little sulphur dusted about the new growths of the *Odontoglossums* will act as a deterrent, and is a necessary precaution where fire-heat has to be applied. Fire-heat should be used with caution, and the night temperature kept at or about 50°. Anything above this is likely to lead to trouble from insects, and it is not wise to go much below, or the growth will not be so free as desirable.

H. R.

Cypripedium Arthurianum.—The growth of this *Cypripedium* is not so strong as that of most hybrids, yet it is a thrifty plant when well taken care of, and though even now too rare to be seen in every collection, there are many fine specimens of it where it has been carefully grown for years. The parentage is easily discerned, the influence of *C. Fairrieanum* being plain in the drooping petals, while that of *C. insignis* is quite obvious also, so much so that it may almost be taken for a variety of it.

Angraecum Eichlerianum.—This species is very seldom seen under cultivation, yet the blossoms are very pretty and interesting. It grows tall and rather slender, and has medium-sized flowers, with a large lip shaped like a helmet as its principal feature. These have pale green sepals and petals; the lip is white. It may be grown in the warmest house, and owing to its tall habit it is best to give it a pole or trellised block in order that any roots produced on the stem may have something within reach to take to. A native of the west coast of Africa, it requires ample heat and atmospheric moisture, and the raft should be lightly dressed with Moss. If grown in pots, the compost may consist of Sphagnum and charcoal only.

Phalaenopsis Esmeralda.—Although a rather dwarf species, this *Phalaenopsis* is a fairly good grower and flowers freely, though perhaps somewhat irregularly. The flowers occur on erect spikes from the upper part of the plant and vary a good deal in colour, some being a pale rose or nearly white, others a bright amethyst-purple with many intermediate shades. The plants do well in the intermediate house with other Moth Orchids, and require to be well ripened by standing in a good light towards autumn. This is more necessary with this species than some, as in its native place it is almost, if not quite, deciduous. The roots are stout and vigorous for a *Phalaenopsis*, and it may be grown in medium-sized baskets or pots in a rough mixture of crocks and Sphagnum Moss.

Sobralia Lindeni.—It frequently occurs that distinct and attractive species of Orchids become established in cultivation before any description has appeared in the gardening press. The above *Sobralia* is one of these. It is one of the finest forms that has yet appeared, and is worthy of every consideration. The first plant that flowered in this country appears to have been the one exhibited at the Drill Hall meeting of the Royal Horticultural Society on October 15, 1895, when it received an award of merit. It came from the collection of Mr. C. J. Lucas, Warnham Court, Horsham. The history of the plant then given by Mr. Lucas was that under the name of *Sobralia Lindeni* a few imported tufts were sold by Messrs. Linden, of Brussels, at Messrs. Protheroe and Morris's rooms in Cheapside on September 12, 1893. No particulars were then or have since transpired as to its native habitat. The flowers are as large as those of *S. macrantha*, fine in form and substance. The variation, as far as I have seen, has not been great. In the first place the sepals and petals were bluish-white, the petals much broader than the sepals. The lip also was bluish-white on the basal lobes, but the front portion was of a rich crimson-purple, shading off to a lilac tint towards the margin. The deep-coloured area is traversed by well-defined

white lines, which give it a distinct and charming appearance. The plant has since flowered in other collections. Quite recently two plants have been sold the sepals and petals of which have been pure white, the lip white, flushed with rose towards the base in front of the deeper colouring on the disc; the side lobes white, with alternate deeper purple and white lines running through the base of the throat. The growth resembles that of *S. xantholeuca*. It appears to have a robust and free constitution.—H. J. C.

FERNS.

SUNLIGHT FOR FERNS.

It is in the winter that one realises how greatly the value of well-grown Ferns is above that of others that have been kept heavily shaded all the summer. No greater mistake can be made than to think heavy shading necessary; it is injurious in every way. Badly-grown fronds damp off now, while those that have been hardily grown keep far better. Our market growers especially have found out the advantage of ample light, and the amount of sun allowed their plants would surprise most private growers. In the spring of the present year I saw a house in one of the large market-growing establishments north of London filled with *Adiantums* of the *tenerum* and *Farleyense* section. The sun was high and very powerful, but not an inch of shading was on the whole of this expanse of glass, and the only protection I saw was a few sheets of newspaper on a newly-potted batch. The Ferns looked the picture of health, the charming tints on the young fronds giving the plants a lively and gay appearance. In contrast to this, one may enter scores of private gardens and find the fernery heavily shaded quite early in spring and in late autumn. There are some Ferns that have an especially charming appearance when grown in the fullest light. *Adiantum macrophyllum* is one of these, and the bright red tints on the young fronds are exquisite. Several of the *Nephrolepis* again show very pretty tints, and there is also a beautiful colour in well-grown plants of the new *Anemia rotundifolia*. In the *Gymnogrammas*, again, there is no comparison between plants that have been grown in a good light and others that have been weakened by being kept in the dark.

One of the chief things in Fern culture is the surprising amount of variety in tints of green as well as form of the fronds, but to grow all in a shady house is to destroy a lot of this. That fine Fern, *Microlepia hirta cristata*, as an instance may be brought to a very deep green by growing it in a cool shady house, but this is not advisable, as the pale tint natural to it is very distinct and pretty, besides which the tassels form more freely in a good light. I could not grow *Adiantum Capillus-veneris* fissum well until I brought it up to the light, but since then I have had no trouble with the centre damping, as it used to when growing away from the light. Many more instances could be given if necessary, but those cited will be sufficient to call attention to this phase of their culture. C. H.

Fern spores.—It was not at all a question of my own knowledge or ignorance that I raised, and to which Mr. Hemsley has replied; it was rather because I wished to ascertain what was in Mr. Hemsley's mind in making the suggestion as to precautionary measures in relation to isolating Ferns for the production of seed-spores. I thank him very much for what he has written. In eliciting this information, whilst not a Fern

grower, I wished to learn what were his reasons, and as they are identical with my own, no harm has been done. But I have no doubt there are many readers both amateur and professional who, being Fern growers and perhaps raisers, will benefit very much from what Mr. Hemsley has told them.—A. D.

Hardy Ferns.—Winter treatment.—One of the greatest drawbacks in the culture of our beautiful British Ferns and their varieties is that,

destroyed, are crippled for the season. All hardy Ferns grown in pots should be stored during the winter in a pit with a northern aspect where they get little or no sun, and during severe frosts should have some protection. If lights are used they should be removed in mild weather. Although it is as well to have them under cover at this season, they must be kept as cool as possible. A good covering of dry Bracken is the best protection for the deciduous sorts. It is in the early



Cordylines at Penjerrick. (See p. 413.)

being considered hardy, sufficient care is not given during the winter. Even in their native habitats, where they get a good deal of natural protection, they often suffer, especially from the frost late in spring. Those grown in pots usually ripen off earlier in the autumn, and in mild weather start into new growth again long before their natural period, and on the return of cold winds and frost the young fronds, if not quite

spring that the most care is necessary, especially with the varieties of the Lady Fern (*Asplenium Filix-femina*), as they are inclined to start early, and a slight frost or even a cold wind will damage the young fronds. The spring wind frosts also damage the evergreen sorts more than at any other time. It is advisable to leave all the old fronds on the deciduous sorts until the new ones have well started into growth.—H.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 21.

THE exhibition of Tuesday last was a marvellous one in every respect. The hall was filled from end to end with varied exhibits which were of high-class quality. No one would have dreamed a quarter of a century back that such shows as we now see under the auspices of the Royal Horticultural Society so repeatedly could ever be maintained. The mere fact of making such shows a question of pounds, shillings, and pence is now eliminated. The motives of the majority of exhibitors now-a-days is to further the interests of horticulture, and not one of mere sordid gain.

By far the greater display of Tuesday last came under the investigation of the floral committee, and when it is mentioned that two gold medals were awarded by this body, some idea of the quality may be arrived at. Without entering into details it may be stated that no finer exhibit of cut Chrysanthemums set up in an artistic manner has ever been seen in the Drill Hall than that on Tuesday last, which reflects great credit upon Mr. Lees, the gardener at Trent Park. Turning from these to the magnificent group of winter-flowering tuberous Begonias, an exhibit in itself absolutely unique in character, one scarcely knew which to admire the more—culture and taste displayed in arrangement on the one hand, or the scientific and patient labours of the hybridist on the other. These winter-flowering tuberous Begonias are invaluable for this season of the year; in fact, they are the finest addition made to our plants for the dull season that has ever been produced. Other exhibits of Chrysanthemums were to be seen—groups in the old-fashioned orthodox style and cut blooms upon boards, as in ages past. A notable innovation was, however, to be noted in an exhibit of pompon Chrysanthemums in earthenware vases, Smilax trailing upon the white paper ground—a pretty and suggestive arrangement. Of other groups special note should be made of one of the early forms of *Poinsettia pulcherrima*, which is quite distinct from the type and a better grower. A grand display of winter-flowering Geraniums of the zonal section was also on view. These were almost equal as an exhibit to the Chrysanthemums and Begonias first noted, and of these it is quite safe to say they were the finest lot ever sent to these meetings at this season of the year. Taking into consideration also the fact that they came from Westonbirt, in Gloucestershire, it was wonderful how fresh they looked. A large group of well-grown Ferns from the north of London should also be noted for good culture and effective arrangement. Orchids were displayed in a profuse fashion, too, for November, Cattleyas and Cypripediums predominating. Of the latter, note should be made of the charming little exhibit of *Cypripedium insigne* Sanderae, which is quite a gem in its distinctive features. Some other choice forms of the same genus were also on view. *Cattleya labiata* in varied forms made a charming display.

Of fruits, the chief features of interest were the collections of Apples, upon which the colouring was most brilliant, such as can only be obtained in the most favoured of the country districts. A few vegetables only were shown, these being select stocks of the most approved kinds.

Orchid Committee.

Awards of merit were adjudged to the following:—

CYPRIPEDIUM MILO (Westonbirt variety).—In this the dorsal is about $2\frac{1}{2}$ inches across the top, white, becoming suffused with rose, and spotted with rose-purple in the centre, the basal half green, heavily spotted and suffused with dark brown. The large petals are deep brown, mottled with greenish yellow; the lip rich brown, highly polished, and margined with yellow. From Captain Holford, Westonbirt, Ledbury, Gloucestershire.

CATTELEYA MRS. J. W. WHITELEY (C. Bowringiana × C. Massaiana).—Though the intermediate characteristics of the parents are manifest in this it is scarcely distinct from pale forms of C. Mantini. The sepals and petals are deep rosy lilac, the lip similar in colour around the outer lobes, the centre rich crimson-purple in front of the deep orange disc. The plant carried a two-flowered raceme. In growth it resembles *Cattleya Bowringiana*. From Sir J. Miller, Bart., Manderson, Duns, N.B.

CATTELEYA VESTALIS (C. maxima × C. Dowiana aurea).—The sepals and petals have a very pale tint of rose, and the lip shows the influence of C. maxima by the lines of purple over the surface. The margin is white, suffused and veined with deep rosy purple, the side lobes having a distinct tint of salmon, shading to yellow, lined and suffused with purple through the throat. From Messrs. J. Veitch and Sons, Ltd.

ODONTOGLOSSUM LOOCHRYSTENSE LADYBIRD.—This is a garden hybrid between O. crispum and O. triumphans. It is a beautiful variety, the sepals rich yellow with some purple spots on the basal half. The petals are clear yellow, lighter on the base and centre, slightly crisped on the margin. The broad, flat lip, in the way of O. triumphans, is white, shading to yellow on the disc, with a large brown spot in front and some smaller ones on the sides. The plant carried a ten-flowered raceme. From Mr. W. Thomson, Stone, Stafford.

Messrs. J. Veitch and Sons, Ltd., showed a grand group, one of the finest features being the exhibit of eight plants of the lovely *Cypripedium insigne* Sanderae. Other *Cypripediums* were C. Prospero, in which the intermediate characteristics of the parents could be plainly observed; C. Actæus, which had large brown and purple spots on the dorsal sepal; C. Creon and C. enanthum superbum. Good forms of C. Arthurianum, some fine C. Niobe, C. Hero and a good form of C. Enid, in which the dorsal sepal is white beautifully suffused with rose, the petals heavily suffused with rosy-purple, were also shown. The most prominent among hybrid *Lælio-Cattleyas* was a grand form of L.-C. Dominiana (purpurata × Dominiana) with two flowers. The open portion of the lip was $2\frac{1}{2}$ inches across and 3 inches long, rich crimson, veined with a darker shade of crimson, with a small light blotch in the centre at the front. The basal portions have the yellow lines of the C. Dowiana parent. The sepals and petals, also unusually large, were of a bright rosy-lilac. L.-C. Decia was included in varied forms. L.-C. Lady Rothschild has fine deep rose sepals and petals, the front lobe of the lip rich crimson. L.-C. Semiramis is very similar to the last variety, having a broader lip with a larger white central area. L.-C. Statteriana was also included. *Cattleya Pearl* (C. fausta × C. Harrisoniae) has deep rose sepals and petals, the lip also rose suffused with crimson, shading to yellow in the throat. C. Atlanta with its richer crimson and purple flowers was very attractive. C. Portia shows the influence of the first-named parent. In *Cattleya Ariel* (C. Bowringiana × C. Gaskelliana), shown for the first time, the sepals and petals are deep rose, the broad front lobe of the lip crimson-purple, the side lobes rose, shading to yellow at the base. *Epidendrum Wallisii* ciliare was also included. A silver-gilt Flora medal was awarded. Messrs. H. Low and Co., Bush Hill, Enfield, sent a small group, consisting of *Oncidium varicosum*, *Lælio-Cattleya Nysa*, L.-C. exoniensis, L.-C. Decia, some good *Cattleya Dowiana aurea*, *Cypripedium insigne* Laura Kimball, a good form of C. Milo, C. Henry Graves, and a good plant of *Cynoches chlorochilon* with three female flowers. Messrs. Paul and Son, Cheshunt, sent round baskets filled with C. insigne and its varieties, C. Leeanum, C. Spicerianum, and C. Ashburnton, and two baskets of the pure white *Masdevallia tovarensis*. Mr. E. Kromer, Bandon Hill, Beddington, Croydon, sent fifteen vases of cut *Cattleya labiata* flowers and a variety with splashes through the centre of the sepals and petals, to which the name of C. I.

Kaiser Wilhelm II. was given. Captain Holford was awarded a silver Flora medal for a choice group of *Cypripediums*. The most prominent among them were C. insigne (Harefield Hall var.), with its immense dorsal sepal finely spotted; C. i. Sanderae, with two flowers, and C. i. Youngianum, shown as C. i. Ernesti. C. i. Dorothy, another yellow form, C. vexillarium, C. Arthurianum, and C. Niobe were well represented. Numerous forms of C. Leeanum, C. Morganæ, C. Pitcherianum, good varieties of C. Charlesworthi, and C. Spicerianum were also included. Mr. J. Bradshaw, Southgate, was awarded a silver Banksian medal for a choice group. Among the fine *Cattleya labiata* was a white form, C. I. J. Bradshaw, the sepals and petals pure white, the lip white, suffused faintly with rose, with some orange-yellow in the throat. Some good forms of *Cattleya Mantini*, a good C. maxima, *Lælio-Cattleya Mrs. Astor*, the petals pale yellow, the sepals darker, the front lobe of the lip rosy-purple, shading to yellow in the throat, and a dark form of *Cymbidium Traceyanum* with a thirteen-flowered raceme were also shown. *Lælia autumnalis alba* was also included. Mr. W. A. Bilney sent eighteen vases of cut *Cattleya labiata* flowers, a good form of *Vanda cœrulea*, and a nice spike of V. Sanderiana. Frau Ida Brandt, Zurich, sent *Pescatorea Gareana* and P. Dayana. Mr. W. Thomson showed *Odontoglossum crispum Meteor*, a beautiful form both in shape and substance, the deep rose suffusion from the back showing through the sepals and petals, the almost white surface thickly covered with small brown spots. The plant carried a three-flowered spike. Mr. H. Little, The Barons, Twickenham, sent a three-flowered raceme of the long-bulbed section of *Cattleya maxima*, the type that was more frequently met with some years ago than it is at the present time. Mr. R. Ashworth, Oaklands, New Church, Manchester, sent a plant of a white *Cattleya labiata* named C. I. White Empress. The sepals and petals, of fine form and substance, are pure white, the lip white, with an oval-elongated crimson blotch in the centre and some yellow in the throat. The plant resembled to a great extent the one exhibited at the last meeting by Mrs. Briggs-Bury, with the exception of the blotch, which was broader and less elongated in the plant previously certificated than in Mr. Ashworth's variety. It would be interesting to compare these last two varieties with C. I. Cooksonæ and C. I. Sanderae, both having previously been certificated.

Floral Committee.

The following received an award of merit—

BEGONIA SYLVIA.—This, an addition to the B. socotrana crosses with the tuberous-rooted Begonia, is of quite a new shade of colour. The older flowers are salmon-rose in tone, while the younger blossoms are more heavily flushed rose. The habit, too, is more erect and the flowering very free, even quite small plants being full of blossom. From Messrs. Jas. Veitch and Sons, Ltd., Chelsea.

DRACENA THE QUEEN.—A pretty and graceful kind for table work, the leaves, which are distinctly narrow and rather long, being striped with scarlet on a coppery red ground. From Messrs. Jas. Veitch and Sons, Ltd.

PELARGONIUM LILIAN.—This is one of the zonal section, the truss large and compact, the flowers well formed, of fair size, and of a pretty shade of delicate pink. From Capt. Holford, Westonbirt, Gloucester (gardener, Mr. A. Chapman).

CHRYSANTHEMUM MRS. ALFRED TATE.—This is best described in its true light, viz., a clear chestnut-bronze sport from the well-known Etoile de Lyon. The sport is evidently as meritorious as the original, and is a decided and attractive novelty. From Mr. F. A. Bevan, Trent Park, New Barnet (gardener, Mr. W. H. Lees).

Messrs. James Veitch and Sons, Ltd., King's Road, Chelsea, showed a beautiful group of new winter-flowering Begonias. In the past quite small scraps of blossom have been all that has

been seen of the Begonia in winter, even where some care has been bestowed upon its culture. In towns and low-lying or smoke-laden districts even this supply has been reduced to a minimum. For the future, thanks to the Messrs. Veitch, the conservatory and the greenhouse in midwinter may be made as bright and cheerful as in midsummer by the free use of these beautiful and attractive kinds. Already have several new and very showy kinds put in an appearance, and now no season passes without an addition being made to the list of novelties. Nor is it merely a new plant or a new colour; there is a decided improvement in habit, vigour, and freedom. All this was clearly shown at the Drill Hall this week when the earliest of the race as also the most recent additions were placed side by side. As is probably now well known, these new winter Begonias have been raised by crossing *B. socotrana* and varieties of the tuberous-rooted section, thus showing the value of well directed effort. Among the earliest was *Myra*, with a rather loose spreading habit. Another is *Ensign*, a richly coloured kind, erect in growth, fine in foliage, handsome, and free. *Winter Cheer* is another whose colour may be anticipated by its name. Bright, free, and cheerful, erect in carriage, this is one of the best. It may be described as cerise-scarlet. *Mrs. Heal* is another, flowers large, almost scarlet, and very free. *Sylvia*, described elsewhere, is the most recent of novelties in this line. A very pretty form more bush-like in habit is *John Heal*, free and graceful in habit, with rosy scarlet blossoms in plenty. One long table was not quite capable of holding all the plants, and a wonderful array of colour was the result (gold medal). Mr. F. A. Bevan, Trent Park, New Barnet, had a magnificent arrangement of Chrysanthemums. The group generally had much in common with some others previously noted, with the exception that the flowers were more liberally employed and that all were of the finest description, to say nothing of the perfect taste in arranging. It is not possible to name all in such a fine exhibit as this, but the arrangement was in this wise: A central figure was a tall and graceful Palm—*Phoenix rupicola* probably—and on either side of this, fronting each way, were tall masses of *Phœbus* and *Oceana*. There were a dozen blooms of each of these grand yellows, every one of the highest standard of excellence. From this centre of gold, extended right and left vases or receptacles of the handsomest kinds in commerce, such as *Mme. Carnot*, *G. J. Warren*, *Mutual Friend*, *Madeline Davis*, *Chas. Davis*, fine bronze; *Joseph Chamberlain*, gold and crimson; *H. J. Jones*, a remarkable shade of velvet crimson and huge, spreading flowers; *Mrs. J. Bryant*, rose-pink, with mauve; *Beauty of Castlewood*, *Mons. Chenon de Leche*, *Chatsworth*, a picture of rare beauty; *Surpasse Amiral*, a mass of gold; *Ma Perfection*, *Empress of India*, very fine; *R. Hooper Pearson*, a dozen or so in glorious colour, and many more. Then around and here and there small and large baskets were grouped with pretty and pleasing single kinds that greatly enhanced the value of the exhibit as a whole. Foliage in variety was employed pretty freely, and of this we noted *Beech*, *Bracken*, *Oak*, the silky heads of the *Clematis*, and even fronds of the *Osmunda* were employed for the tone of colour. These and a few *Croton* leaves were the chief, all interstices being hidden by a bed of fresh green Moss. This was one of the finest groups ever seen at the Drill Hall (gold medal). Another very striking feature was that of *Pelargoniums* from *Capt. Holford*, *Westonbirt*, *Gloucester* (gardener, Mr. Chapman). Usually such things are merely set up in trusses of bloom, from which no lesson is forthcoming. In this instance it was a pleasure to see the plants, and, remembering that these came from a distance, the entire lot was highly creditable. From the clear and lofty tableland whereon *Westonbirt* is situated we may expect to see these bright and vivid colours to perfection. The largest examples were in 8 inch pots, and not a few of the plants carried from a dozen to eighteen handsome

heads of bloom. The feature of the group was the great variety, showing how well these plants succeed in pure air. Among the finest was *Ian Maclaren*, a salmon-scarlet, with salmon margin; *Dr. Nansen*, snow-white; *H. de Percival*, pink and white; *Norah*, soft pink; *Athlete*, fine dark crimson; *Zenobia*, cerise-scarlet, very telling; *Chaucer*, rose; *Paul Campbell*, crimson, immense truss; *Mrs. Simpson*, centre salmon with white margin; *Lady Newton*, pale salmon with scarlet Picotee-like edge, and *Agnes*, pure white. *Lady Chesterfield* was also fine. From the same source came that striking stove climber, *Ipomœa Horsfallia*, a fine plant too rarely grown to perfection. A silver-gilt Flora medal was awarded. A capital exhibit of Chrysanthemums came from Mr. F. H. Flight, Cornstille, Twyford, Winchester (gardener, Mr. W. Neville), in about equal proportions of Japanese and incurved varieties. For freshness and good finish, and in the latter particularly, nothing better has been seen this year, the varieties including *Mme. Ferlat*, *Lady Isabelle*, *Major Bonafon*, *R. C. Kingston*, *Le Marcedon*, *Bonnie Dundee*, *Ma Perfection* (very fine), *Miss Haggas*, &c., the Japanese sorts being represented by *Master H. Tucker*, *G. F. Warren*, *The Wonderful* (a golden-bronze), *The Convention*, *President Nonin*, *Mme. Gustave Henry*, *G. C. Schwabe*, *Graphic*, *Viviani Morel*, and others, for which a silver-gilt Banksian medal was awarded. From Nunhead Cemetery Mr. J. W. Witty sent a group of that most curious of all Chrysanthemums called "What Ho." It is an illustration of the never-ending freaks of the Chrysanthemum, the single row of florets emanating from the disc falling into a confused, meaningless tangle all around, in which neither beauty, grace nor merit was, to our thinking, discernible. It is far from free-flowering, and many plants did not carry a single good head of florets. An exhibit of pompon and Anemone-flowered Chrysanthemums came from Lord Aldenham, Aldenham House, Elstree, Herts (gardener, Mr. E. Beckett). Of the pompoms, *Primrose League*, *Elinore*, *Orange Beauty*, *Golden Mme. Marthe*, *Chas. Dickens*, golden bronze; *Rosinante*, reddish pink; *Wm. Westlake*, *Snowdrop*, perhaps the smallest and fairest of all the tribe; and *Helen*, a claret-coloured sort, were the best (silver Flora medal). Mr. J. T. Bennett-Poë, Holmwood, Cheshunt, sent a large group of *Pinguicula caudata*, with many bright blossoms. It is a pretty moisture-loving species, and revels in the shade and cool of the greenhouse. A hybrid pink *Hippeastrum*, *Mrs. Garfield*, came from the same source, the trumpet-shaped flowers being heavily veined with white. Bunches of double Violets came from Mr. W. Evans, Forde Abbey, Chard (gardener, Mr. Crook), the varieties being the white *Comte de Brazza*, *De Parme*, and *Marie Louise*. Chrysanthemum Golden *Mme. Ferlat*, from Mr. A. J. Willmott, Exmouth, Devon, was hardly equal to many kinds, but, representing as it apparently does a sport from *Mme. Ferlat*, would suggest good material to work upon. A rather telling incurved Chrysanthemum named *Mrs. W. Howe* was staged by Mr. W. Howe, gardener to Sir H. Tate, Streatham Common, the colour being golden bronze and the blooms fairly large and well formed. A pure white Japanese kind called *Snowdrift* was sent by Mr. H. Weeks, Thrumpton Hall, Derby.

Ferns from Messrs J. Hill and Sons, Lower Edmonton, included some good things, and in a few instances large examples also. Of the more prominent was *Brainea insignis*, with something of the *Blechnum* in its general aspect. *Adiantums* were good generally, and included *A. Faulkneri*, *A. scutum*, *A. decorum magnificum* (a fine piece, 4 feet across), *A. Williamsi*, &c. The graceful *Onychium auratum* was very pleasing. A pan of the miniature *Davallia parvula* bore evidence of good culture. Not least among the miniature gems of this lot was the pretty *Actinopteris radiata australis*, whose fronds of an inch or so across constitute a perfect miniature of the well-known *Latania borbonica* in the general outline rather than in formation. The leaf-stalk is

only 2 inches or so long, and the appended leaf-blade is divided into four sections, each section again divided into four linear lance-shaped segments, the whole forming a complete frond of great beauty. *Hymenophyllum hirsutum*, a pan of which was also shown, had the brownish tint of autumn, a characteristic more or less permanently retained. Other plants included large examples of *Davallia Tyermanni*, *Lomaria gibba*, *Polypodium sporadocarpum*, &c. (silver Flora medal). Messrs. Cripps and Sons, Tunbridge Wells, brought up a very fine group of *Poinsettias*. The plants in 5 inch pots were about 3 feet high and carried foliage to the soil (silver Flora medal). Messrs. J. Peed and Son, Roupell Park, West Norwood, had a group of Chrysanthemums in pots. Here many of the leading sorts were noted, *Phœbus*, *Modesto*, *Mme. Ferlat*, *R. Hooper Pearson* and others. Unfortunately, the group was not in a good light, and much of the effect was lost thereby (silver Banksian medal). Cut blooms of Chrysanthemums from Mr. Godfrey, Exmouth, were in many instances showy and good, *Surpasse Amiral*, *Wattle Blossom*, *Capt. Bellamy* (rich yellow), *Autumn Glory*, *Mme. C. Ray* (pink), *Joseph Chamberlain* (crimson and gold), and *Wilfred Godfrey* (gold) being the best. *Miss Mercer* is a pretty single white, which, if dwarf in habit, would prove quite an attractive kind (silver Banksian medal). A batch of *Cyclamens* from Messrs. Hugh Low and Co., Enfield, included *Bush Hill Pioneer* in both red and white forms. There were also what was termed the double kinds, which, if possessing additional petals, do not seemingly have the grace and beauty of the original kinds (silver Banksian medal). Messrs. George Bunyard and Co., Maidstone, sent cut plumes of a good *Pampas Grass*, *Gynierium argenteum* *Louis Carrière*, in which a reddish tint prevailed. Messrs. Sander and Co., St. Albans, set up a few plants of *Dracena Sanderiana*, *D. Godsefiana*, and *Linospadix Petrickiana*. *Kentia Sanderiana* is a neat and pretty Palm that sends forth basal breaks as in *Areca lutescens*, &c. *Arbutus Unedo Croomei*, tinted red on the more exposed side of the bloom-clusters, was contributed by the Messrs. Veitch and Sons. This in a favourable position should prove a useful kind. We believe the variety is also called *A. U. rubra*.

Fruit Committee.

Awards of merit were given to

APPLE BARSALEG PIPPIN.—The fruit of this is conical, skin yellow, much striped with red, flesh soft and juicy and exceedingly pleasant. It is said to be a good cropper. From Mr. Basham, Barsaleg, Monmouth.

PEAR DOUBLE DE GUERRE.—A very handsome and well coloured baking variety, the fruits of good size and not unlike those of *Durondeau*. From Mr. F. Lloyd, Croydon.

Mr. Basham staged very fine collections of Apples, one grown in his own nursery, the other representing varieties grown in the county of Monmouth. Each comprised 100 dishes, and included many very fine samples, whilst colour was striking. The nursery-grown group included very good *Bramley's*, *Murfit's Seedling*, *Emperor Alexander*, *Prince Albert*, *Peasgood's Nonsuch*, *Mère de Ménage*, *Tyler's Kernel*, *Bismarck*, *Annie Elisabeth*, *Catshead* and others. Rich in colour were *Hoary Morning*, *Crimson Queening*, *Baumann's Red Reinette*, *American Mother*, *Ten Commandments*, &c., whilst of dessert varieties, *Allington Pippin*, *Wheeler's Russet*, *Braddick's Nonpareil*, *Mabbott's Pearmain*, and *Adams' Pearmain* were good. In the county collection the dishes, some of which came from old orchard trees, were very fine, *Blenheim Pippin*, *Newton Wonder*, *Prince Albert*, *Beauty of Kent*, *Peasgood's Nonsuch*, *Bess Pool*, *Cox's Orange*, *Ribston*, *Claygate Pearmain*, and *Court pendu Plat* being the best. A silver-gilt Knightian medal was awarded. Messrs. J. Laing and Sons, Forest Hill, set up a collection of some eighty dishes of Apples, *Golden Noble*, *Tyler's Kernel*, *Mère de Ménage*,

Mabbott's Pearmain, Adams' Pearmain, Sandringham, and Ribston being the best. Beautiful colour was found in Tom Putt, Cox's Pomona, Flanders Pippin, Fearn's Pippin, and Gascoigne's Scarlet (silver Knightian medal). Messrs. Harrison and Sons, Leicester, had a good collection of vegetables, including Up-to-date, Banbury Cross, Rousham Park, and Leicester Globa Onions, Up-to-date, Motor, Windsor Castle, and other Potatoes, Lyon, Exhibition, and Leicester Hero Leeks, Intermediate and Blunt-rooted Carrots, good Beet, Parsnips, &c. (silver Banksian medal). Mr. Basham sent Apple Cissy, somewhat resembling a large Nanny. It is a conical, handsome fruit, rich in colour, flesh firm, but wanting in flavour. Messrs. Wallace and Co., Colchester, sent fine fruits of Allington Pippin. Mr. H. Spencer, Goodrich Court, Ross, had a seedling Apple not unlike Tyler's Kernel or large Hall Door, but it had no merit. Some Cobnuts from Mr. Vokes, Winchester, saved from the previous meeting for comparison with others, were found to be the same as Cosford Cob. Mr. J. Crook sent very fine and richly flavoured Winter Nelis Pears from Forde Abbey, and also Apples to show colour, Wellington especially. Lord Ducie sent fine fruits of the Japanese Medlar (*Diospyros Kaki*) grown on a wall outdoors at Tortworth Court. These were large and of clear yellow colour, but quite hard. A Cucumber named Wilton's Prolific was found to be Rochford's Market. Mr. G. Wythes sent from Syon House Gardens Barkham's Dwarf Beet, which was thought to be like Dewar's Short-top. Mr. Notcutt, of Woodbridge, sent Winter Orange stewing Pear.

NOTES OF THE WEEK.

Chrysanthemum Miss Rose.—Among the single-flowered varieties this possesses a charm all its own, the habit being dwarf, while the flowers are produced very freely. Even when grown in pots with liberal treatment this freedom is seen, and with greater liberty in the open beds the plant is a marvel of free-flowering. A group of this kind at Kew near the Orchid houses is very effective now, the third week of November.

Violet Princess of Wales.—I am sending you a few blooms of Violet Princess of Wales. I consider it the best of all single Violets either for frame or border culture. I commenced gathering flowers from the open borders in September, and at the present time the plants are blooming very freely—much more so than The Czar. These I send were gathered from frames.—G. J. SQUIBBS, *Llangedwyn, Oswestry.*

* * Fine in size and lovely in colour.—Ed.

Pear Bonne de Malines.—Mr. Crook sends us from Forde Abbey Gardens, Chard, some very fine fruits of this Pear, better known as Winter Nelis. They are from a tree growing against a west wall some 12 feet high, the tree covering a space of 12 square feet. It is grafted on the Pear, the soil being a free loam, and in dry weather is given liberal supplies of water. This Pear, in our estimation, is the best flavoured of any, equalling the favourite Doyenné du Comice.

The Sea Buckthorn (*Hippophae rhamnoides*).—I have had a plant of this for ten years which has never produced berries. It has gradually thrown up a number of suckers this year. It has six berries. Is it possible that some of the suckers can be male plants? There is no other Sea Buckthorn within 400 yards, and though I have planted two male plants beside a female one, the former are so young that the latter has not as yet borne any berries. I should be very glad to have some explanation of this.—HIBERNIA.

Dahlias and Marigolds in the open.—The 20th of November is certainly a late date for either of the above to be seen in presentable flower, more particularly in the neighbourhood of the Thames at Hampton. Of the Dahlias there was a number of really good serviceable flowers, all of the Cactus type seemingly, but little the worse for their rather late appearance. A beautiful lot of Marigold flowers of a pretty strain covered the dwarf bushes as freely as in August. Near by *Jasminum nudiflorum* had already burst into a yellow mass of bloom, telling of winter's near approach. How the Dahlias had

escaped frost is not easy to tell, as they were quite exposed in the garden and not 100 yards from the river.

Apple Peasgood's Nonsuch.—Some grand specimens of this fruit have been exhibited in Devon this autumn, notably Exeter, Exmouth and Sidmouth, but perhaps not quite so highly coloured as last season. I have an espalier, also a tree with four shoots trained round an upright iron trellis, both cropping regularly every season and finishing up very fine fruits. I send two for you to see. Each tree carried over five dozen fruit this year, the majority nearly as fine as those sent.—J. MAYNE, *Bickton, Devon.*

* * Superb specimens, one being 13 inches in circumference. It would be hard to find better ones.—Ed.

Eschscholtzia crocea.—I have cut many fine flowers of this during the week just past, and I should say this is about a record for lateness, though the plants are now full of buds, which would all open if the weather kept as mild as it is now. The plants are self-sown seedlings from those that flowered in summer, and are very pretty with their fresh green leaves and showy blossoms. Dahlias here are holding out in a remarkable manner, and I could cut a bushel of flowers as fresh and beautiful as in August.—SUFFOLK.

A fine Epiphyllum truncatum.—A specimen of this Epiphyllum such as one rarely meets with nowadays is in full flower in the succulent house at Kew. It is grown in the form of a standard, being grafted on to a *Pereskia* stock about 4 feet high. The Epiphyllum has formed a large branching head a yard or more through, which is profusely laden with its brightly coloured blossoms. The conditions under which this plant is grown in the succulent house are highly favourable to the production of blossoms, as the occupants of that structure are not shaded at all during any period of the year.—T.

Aster grandiflorus.—The great heat of the present year cannot be said to have exercised any good influence in respect of this, probably the finest of all the perennial Asters. The prolonged heat, holding many things so firmly in its grip that growth meanwhile was an impossibility, likewise delayed the growth of this, and its flower-heads in open gardens, notwithstanding rain and many favourable days, are no more plentiful than in many a past year. As a pot plant, however, it is still worth every care, and if plunged in the open garden where copious waterings can be afforded it will repay all in due course both by its dainty habit of growth and its attractive and numerous blossoms.

Celosia pyramidalis.—When the greenhouse or conservatory is given over to the Chrysanthemums other things are apt to be overlooked, yet the above in well-grown plants is effective in the greenhouse, and at least gives diversity, both of character and certainly of colouring, to the usual occupants. Too showy it may be for some who do not care for such gaudy colours, yet among many things in the greenhouse, especially plants of heavy and sombre leafage, a few of the above would materially assist. Such easily produced plants should be of much assistance when good plumes are obtainable in pots 6 inches across. Not least of their value is the time such things remain in presentable condition.

Cornish Gilliflower Apple.—I am sending some samples of this year's crop of Cornish Gilliflower Apple. I was taken to task last year for putting this about on a par with Ribston and Cox's, but still hold to the opinion that, given samples like this, it is very little behind those varieties. The trees bear very fairly with me, the chief drawback being the attacks of birds, which display a strong partiality for the fruit and go for it while yet in a green state. I am compelled to net the trees.—E. BURRELL.

* * Beautiful fruit. It is a pity this fine fragrant and handsome Apple is not more and better grown. Our friends in Cornwall ought to send to the market large quantities of it. We believe it does not fruit very often in consequence of the cutting away of the fertile parts of the shoot in

had pruning. No American Apple is better in flavour or handsomer.—Ed.

Chrysanthemum Val d'Andorre.—This, though an old kind, is just as well worth growing as ever. This much is fully borne out at the present moment both in the Royal Gardens, Kew, and in the big vinery at Chiswick. In each instance several plants display well the showy chestnut-red or mahogany-red flowers that are produced on stout stems, the entire plant being about 3 feet above the pot. At Kew the plants are grouped in the front of the centre bed in No. 4 greenhouse, and immediately behind it is that other highly-coloured sort, Tokio. Those who prefer such showy and decided colours should grow these, for in the dismal surroundings of a foggy day both kinds are seen to advantage, while not a few of the more mixed-up shades are either washy or indistinct.

Colchicum Sibthorpi.—This fine Meadow Saffron, which deserves the praise you give it on p. 391, is later with Mr. Kingsmill than it is with me. It has been past here for some time. I am much interested in the genus, although one finds that some do not care for the flowers, and would be glad to know if the corms at Harrow Weald are established or if they were planted late in the season. It is possible that there is more than one variety of *C. Sibthorpi*, and that, if more, these flower at different times. One would gladly, if possible, have the fine flowers a little longer. Nearly all the Meadow Saffrons are out of bloom here, but a few doubles still remain, with *C. holophum*—or what I have for it—a free-blooming little Meadow Saffron. The Crocuses now in flower are more fascinating, but there is more than room for all at this season.—S. ARNOTT.

Caryopteris mastacanthus.—The frequent references to this pretty shrub in the gardening press have probably led to its introduction into many gardens. It will be a favour if some of the readers of THE GARDEN who are living in some of the colder districts will inform me if it has flowered with them in the open this year. It is offered in some catalogues as a hardy shrub. My experience of it in the open is as yet limited here to the current year and to its conduct during the past winter. The March frosts destroyed the young shoots, which were considerably advanced, and fresh growth had to be made. Flower-buds were formed in autumn, but these have not opened. I think it is possible that the plant, which is in a warm position, might have opened its flowers had it not been for the check in spring. Could we rely upon the *Caryopteris*, it would be a valuable shrub for the rock garden.—S. ARNOTT.

Callistephus sinensis.—With reference to the remarks made by "H. P." and "A. D." on p. 385 relative to this plant no parallel can be drawn between it and the single forms of the ordinary annual Asters. The single annual Asters in commerce, which are reversions from the double forms, are coarse and straggling in growth and bloom very early, before the doubles. *Callistephus* (*Aster*) *sinensis*, on the other hand, blooms very late, when all other Asters (double and single) are past, and has a fine symmetrical growth, with flowers of a highly refined character and distinct in colour. Moreover, it reproduces itself true from seed and has every indication of being a distinct species.—P. R. BARR.

— I did not at first think much of this when the plants flowered, but I changed my mind after. They bloomed later than any of the other Asters, and certainly were very beautiful and much admired. I cut some blooms four days ago. This Aster is well worth growing, as the colour is so soft and uncommon. I have been able to save a lot of seed.—G. S. JELICOE, *Wimborne, Nov. 11.*

Antholyza æthiopica.—The other day we directed attention to the beautiful and rare, if not indeed remarkable, variety of the above species called *A. æ. vittigera* that Mr. Bennett-Poë brought to the Drill Hall. At the present time the form minor is yielding a few flowers at Kew in the No. 7 range. From this example one is not greatly impressed with its showy character or its

freedom. Apart, however, from its smaller stature, the flowers are almost self-coloured, devoid of the yellow exterior to the tube of the corolla as seen in the variety *vittigera*. We incline to the opinion, however, that a much more liberal treatment is needed to fully develop flowering-spikes in so free-growing and vigorous a plant. The increase of the rootstock as much as the general character of the growth all tend to strengthen the suggestion that with greater freedom for the roots a much freer flowering would ensue. Montbretias as pot plants flower with little trouble in the first year, but this freedom of flowering is not maintained without special care, as repotting, &c. The above forms of *Antholyza* are more vigorous than the majority of Montbretias, and coming into bloom in the early autumn would form an attractive and picturesque group if accompanied by a greater freedom of flowering each succeeding year.

The blue Primroses.—It is often said that the flowering of Primroses and Polyanthus at this time is unseasonable. This is hardly correct, for it is the usual thing for many to throw up blossoms at this season if the weather is at all open. A good many are now showing a few flowers, and among them are Mr. G. F. Wilson's blue Primroses. In spring we shall possibly be told that these flowers are not so good as the others. This saying misses one of the points which distinguish them from our ordinary Primroses. This is their early blooming habit. They are at their best before the others are in full beauty. The blooms at present being produced are on shorter stalks than in spring, but they are in no other respect inferior to those given in the spring-time. They are of that deep rich blue which was the aim of the raiser, and which is wanting in the flowers produced when our charming wild Primroses are in the heyday of their modest beauty. I have at present a couple of clumps of seedlings now some three years old which are blooming freely in rather heavy soil and in a cold exposure. The flowers are very beautiful indeed and only require to be seen to draw forth admiration. The colouring is vastly superior to the slaty-blue shown by some plants in April and May.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Sternbergia lutea.—In answer to Mr. Tallack, the following, I have no doubt, will include the information he desires. *Sternbergia lutea* is not a free-flowering plant, neither is it a free-growing plant. It dies out, while the variety *angustifolia* grows and flowers in the most satisfactory manner. I suspect that this plant is always referred to whenever any good account is given of the species. This variety with me produced leaves 12 inches to 14 inches or more long and three-eighths of an inch wide, forming a fine mass of foliage. The type has shorter leaves and at least half an inch broad. It does not appear to be worth growing from a garden point of view, while the variety *angustifolia* is one of the finest of autumn-flowering bulbs and quite indispensable. In the light soil of the Cambridge Botanic Gardens it does remarkably well, and probably its success may largely be due to summer dryness. There are forms with still narrower leaves than this, and Mr. Baker mentions the var. *græca* which has leaves only one-twelfth of an inch to one-eighth of an inch broad, and flowers with oblanceolate perianth segments. There are a similar form in Crete with a longer peduncle and also the var. *sicula*, the precise dimensions of which are not given.—R. IRWIN LYNCH, *Botanic Gardens, Cambridge.*

—What has appeared in THE GARDEN regarding this "Lily of the Field" shows us that the desire to help others which exists among those devoted to their gardens is in no way abated. Not only from your pages, but also from private letters received one has again found this in connection with difficulties experienced. Judging from specimens sent and from the information supplied, I think that in most instances the *Sternbergia* which blooms so regularly and well is

the variety of *S. lutea* known as *angustifolia*, which is referred to by Mr. Tallack in THE GARDEN of November 18. From various quarters I have had specimens sent me with a courtesy I desire to acknowledge. It may be that most of the references we have seen in past years may be to this narrow-leaved variety. It is recognised by some of the older works of reference, but does not find a place in Mr. Baker's handbook of the natural order to which the genus belongs, unless it is the form *S. sicula*. While, as "E. J." suggests, a cold subsoil may have a good deal to do with the failure of *S. lutea*, that is not the cause of its non-flowering here in the past. The addition of lime, as formerly advocated, is little trouble and is well worth a trial.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Convolvulus Cneorum.—When we in the north have to bewail that our gardens are deprived of much of their charm by the weather conditions, the delightful articles by your South Devon correspondent give even greater pleasure than when our flowers are plentiful. The pleasure is, perhaps, mingled with sadness at the thought that we cannot refresh our eyes with looking upon the flowers themselves. One is led into this train of thought by a couple of branches of *Convolvulus Cneorum* in bloom included in a box kindly sent me with some bulbs by Mr. T. Archer-Hind. Not only can we not have it in flower here at this season, but I hardly think that we can grow it permanently in our northern gardens. I do not know that it is growing without protection in any Scottish garden, unless it may be in one somewhere on the west coast, such as that of Mr. Osgood Mackenzie, where the influence of the Gulf Stream gives a mildness to the air we have not even in the south-west. This *Convolvulus* recalls the recollection of it in the delightful garden at Mount Usher, in Co. Wicklow, where it seems to thrive to perfection. It is, indeed, a lovely plant with its silky stems and leaves and its exquisite white flowers flushed with pink on the exterior. Like most plants covered with silky hairs, it seems to dislike much rain in winter, and in wet districts needs to be covered with glass. A little protection of this kind is not too much trouble for the pleasure given by this lovely flower.—S. A.

Tropæolum tuberosum.—It is gratifying to see from Mr. James Day's courteous and valuable communication on p. 389 that the beautiful *Tropæolum tuberosum* is more amenable to cultivation with some than I had supposed. While my remarks upon it were principally directed to show its want of value as a hardy perennial, at the same time I had known of so many disappointments with it as a half-hardy plant, that I was hardly prepared to hear of it flourishing and flowering so well in the adjoining county to that from which I write. Wigtownshire is, of course, as one has found from correspondence, rather warmer than this, but I imagine that the difference lies in a slightly higher winter temperature rather than in more warmth in summer. It is not improbable, therefore, as Mr. Day suggests, that this *Tropæolum* might succeed with me as a half-hardy plant, seeing that it does so well at Galloway House as to merit the praise given it by one so careful and observant as Mr. Day. The cases in the south of Scotland in which it has come under my observation have been a little further inland than this, and in gardens which, to my knowledge, have more warmth in summer than mine, which gets a good deal of wind and which is cooler on this account. The experience of your correspondent shows us another example of a truth we all need to keep in mind in our gardening, *i.e.*, that gardens in the same districts vary much, and that we cannot say without reservation that any given plant will or will not succeed in any specified garden. By the way, a research for records of experience with this *Tropæolum* has reminded me of what I had forgotten, that the tubers are edible. I do not know if any of your correspondents have cared to submit them to the test of the palate. The description of their flavour is not particularly tempting.

They are said to have a perceptible flavour of Watercress, with some of its acrid character. Although not hardy with us it may be in, say, Devonshire.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

PUBLIC GARDENS.

A recreation ground at Worsley.—We learn that Lord Ellesmere and the Bridgewater Trustees have given to the district council an extensive tract of land known as Roe Green for a public recreation ground.

Park de la Tete d'Or, Lyons.—This park lies just outside the city of Lyons and is of great extent. It contains the municipal greenhouses, a fine winter garden, an alpine and botanic garden, the whole under the care of M. R. Gérard. At the time of my visit the beauty of the open-air gardening was over, but in one of the greenhouses there was a large collection of *Chrysanthemums* grown in what is termed the "culturo lyonnaise," which consists in striking the cuttings as late as May and growing only four or five blooms on a plant. These are consequently very dwarf, but they are useful for grouping, and under the care of M. Choulet, the originator of this method, they certainly presented a very nice appearance. Specially noteworthy were Mme. Gustave Henry, President Nonin, Mlle. M. A. de Galbert, William Seward, *Souvenir de Petite Amie*, and Mrs. C. Harman-Payne, all too well known to need description. *Fée du Champsaure*, white; *Le Drac*, a large yellow; Mme. Leblanc, a fine large pure white incurved; and Jules Chrétien, a rosy pink Japanese, with velvety pink reverse, were others equally well done. Others in good form comprised H. Jacotot fils, *Surpasse Amiral*, Mlle. Philomène Claret (a large pale blush Japanese), Lord Brooke, Marie Louise, Mme. Carnot, Mme. Ed. Roger, and Mme. Zurick. In the winter garden, a large glass structure about 80 feet high, were several fine groups of *Chrysanthemums* in full flower. Outdoors some fine groups of Dahlias were untouched by the frost. In the botanic garden many of the annuals, bedding plants, and herbaceous plants were still in bloom.—C. HARMAN-PAYNE.

The weather in West Herts.—During the past week the days were of about seasonable warmth, while nearly all the nights proved cold. On each night the exposed thermometer fell below the freezing-point, and on the coldest of these registered 10° of frost. The latter is the lowest reading as yet recorded here during the present autumn. At both 1 foot and 2 feet deep the ground temperatures are slightly below their respective averages for these depths. No rain has now fallen for nearly a fortnight. Throughout the week the air remained very calm, the mean velocity at 30 feet above the ground on two days being less than a mile an hour. The record of bright sunshine was very poor, four days being altogether sunless. My Dahlias, which had lingered on in a crippled condition since September 29, were killed to the ground by the above-mentioned frost, that of the night preceding the 18th, which is a fortnight later than the average date of their destruction in the previous fourteen years, but five days earlier than last year.—E. M., *Berkhamsted.*

Names of plants.—E. J. Randell.—1, *Adiantum gracillimum*; 2, *Pteris scaberula*; 3, *Tydaea* sp.; 4, *Enonymus japonicus aureo-marginatus*.

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THE GARDEN.

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INDEX.

(Illustrations in Italics.)

Chrysanthemums:—

Chrysanthemum, a plea for a hardier	429
Chrysanthemum General Symons	431
Chrysanthemum Jeanne Delaux	429
Chrysanthemum M. Louis Remy	431
Chrysanthemum Mrs. Filkins	431
Chrysanthemum Mrs. Whitc-Popham	431
Chrysanthemums, border, at Chiswick	430
Chrysanthemums grown in Moss	430
Chrysanthemums, single	429

Orchids:—

Aograeum sesquipedale	431
Calanthe vestita luteo-occulata	430

Cattleya labiata at Fir Grange	431
Ceclogyne cristata in winter	431
Dendrobium aequum	431
Lælia pumila	431
Odontoglossum Elwardi	431
Orchids, back-breaks in	431
Pitumpia fragrans	430
Sobralias	431
Sophranitis grandiflora	431
Thunias, repotting	431
Vandas at Weybridge	431

Stove and Greenhouse:—

Begonia Caledonia	432
Begonia Dregei	432
Begonia Gloire de Lorraine	432
Cyclamens	431
Eucharis amazonica	432
Jacquinia chrysostephana	432
Justicia calycotricha	432
Litium longiflorum from Japan	432
Plants, potting, in winter	431

Rhododendrons in flower	432
Tibouchina macrantha	432

Trees and Shrubs:—

Arundinaria japonica at Castlecliff	439
Arundinaria nobilis at Menabilly	444
Bamboos at Kew	438
Bamboos (Do not coast)	442
Bamboos in England	433
Bamboos, the	433
Bambusa palmata at Castlewellan	435
Phyllostachys nigra at Gunnersbury House	433
Phyllostachys viridi-glaucoceras at Kew	438

Garden Flora:—

Tulipa Sprengeri	438
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Week's Work:—

Fruits, hardy, work among	439
Kitchen garden, work in the	440

Destroyers:—

Canker fungus	410
-----------------------	-----

Roses:—

Rose, the Indian, at Dolgany	446
Roses, climbing	446

Notes of the Week:—

Anemone japonica, a curious form of	447
Aralia Sieboldi variegata in flower	447
Arbutus Ucedo Croomei	447
Campanula pyramidalis alba Carsethorn, a note from	448
Caryopteris mastacanthus	447
Chrysanthemum Admiral Symonds	447
Crocus chroleucus	447
Cyclamen, double	447
Masdevallia towarensis	447

Pelargonium Ian MacLaren	447
Pinguicula caudata	447
Rose Laurette Messimy	447
Saintpaulia ionantha	447
Sternbergia lutea	447
Stokesia cysuea	447

Public Gardens:—

Brookwell Park, proposed extension of	448
Waterlow Park, Chrysanthemums at	448

Miscellaneous:—

Birds and fruit growing	446
Flower growing in the Scilly Isles	441
Moss litter	438
Plants, small, for decoration	445
Pots, ornamental	440
Trade commissions	448
Weather, the, in W. Herts	449

CHRYSANTHEMUMS.

A PLEA FOR A HARDIER CHRYSANTHEMUM.

WHAT Mr. E. H. Jenkins says about his Golden Sheaf in THE GARDEN of November 25 induces me to offer a few remarks upon a phase of Chrysanthemum growing which has for some time appeared to me to be deserving of more notice than has hitherto been paid to it. This is the desirability of raising and growing hardier Chrysanthemums than have of late been introduced.

It must be apparent to most that there are great numbers of admirers who, from choice or necessity, are unable to indulge their liking for the Chrysanthemum from lack of the necessary glass structures. It is likewise apparent that there are thousands of gardens which stand in need of some brightening when November comes. There are some flowers to be had then in ordinary seasons, but their number is very limited and they might be added to with advantage. So far as I know, we have little but the Chrysanthemum to look to for a revolution in hardy flower gardening in November. I have done my best to show the usefulness of other flowers, such as the autumn Crocus, but one must admit that there is room for many other plants, and, above all, room for those which will give us flowers for cutting.

It is, of course, incontestable that in a few seasons there is no difficulty in having Chrysanthemums in bloom outside. I can recollect seeing, one mild winter years ago, a considerable number in bloom in the open in the suburbs of Edinburgh well into December. Our northern capital is not noted for its warmth in winter, so that the fact of these plants being in bloom is encouraging to those who would desire to make use of them in the open. That was, however, a mild season, and cannot be taken as representing the average winter in the Edinburgh district. It is also possible for many in favoured regions to grow many of these flowers to a surprising excellence in their districts. Before me as I write are good blooms grown in the open air by a Cardiff

amateur. These are finer than we could expect to secure here from the same varieties.

All this is, however, only introductory to my main point, which is that raisers should try to obtain flowers capable of standing better than those we now have the weather of our winters. Is it impossible to produce such? I think not. We have some Chrysanthemums much hardier than others. I see some in gardens which are for all purposes equal to hardy perennials. Cannot someone with time and space take these up and evolve from them what would practically be a new race? I am at present inclined to think that our newer Chrysanthemums are not so hardy as those of older date, but there are others better qualified than I am to give an opinion on this point. From my own observation I also think that a hardier race of these flowers would require to be smaller and less irregular in their outlines than our modern Japanese Chrysanthemums. The latter are too large and allow the rain too much entrance to be suitable for standing the stress of our wintry weather. One finds that some of the old reflexed flowers stand better than most. White Christine is, for example, the best I have tried, with the exception perhaps of an old purple one, which I take to be Webb's Queen, which was in this garden when I came to it more than fifteen years ago, and which without protection flowers annually, though late. The reflexed petals seem to throw off the rain and thus guard the blooms from one of the dangers which befall flowers in the open in our winters. The singles and the pompons are also good and useful for outdoor bloom, and one cannot but believe that important results would follow persevering work upon the lines I have ventured to suggest. From the note by Mr. Jenkins already referred to, I think what I have said will meet with his concurrence. He deserves our thanks for engaging in experimental work of a kind which may have a powerful influence upon the gardens of the future. There is ample room for workers in the same field.

S. ARNOTT.

Chrysanthemum Jeanne Delaux.—Is there a richer dark purple Chrysanthemum than the

above? If so, I am unacquainted with it. Those who grow graceful sorts for cutting know its value, a vase tastefully filled with its shaggy blooms having a charming appearance. One may now inspect a great many collections without seeing a plant of Jeanne Delaux. It is not one of the most robust growers, which perhaps accounts for its partial disappearance. If the plants are pinched in March and potted in good loamy compost they will grow into nice serviceable bushes, a dozen or so plants, if little or no disbudding is done, furnishing a most useful lot of flowers. I was pleased to see it mentioned by a correspondent a week or two ago. I do not know if it would be considered sufficiently large for exhibition at the present day, but a good bloom used to tell years ago.—J.

Single Chrysanthemums.—The value of single Chrysanthemums for the decorator has been but tardily recognised, but there are signs that this neglect is to be a thing of the past, for they are beginning to play an important part in trade exhibits. At Manchester Messrs. Clibran had a fine display, showing sprays of many good and distinct new varieties, but as these were almost all shown under numbers, the exhibit was not so useful as it might have been to one taking notes. Among named varieties three crimsons were very good, viz. Felix, Amy Huntley, and Winifred Hull, each differing in shade and form. Mr. Wells had an exhibit of Etoile de Feu, a very bright-looking crimson-bronze, that carries good sprays, but it had almost too many petals to be called a single. While writing of this section of Chrysanthemums it may be useful to add a short list of the older ones which I have found most useful. Mary Anderson, white, changing to blush, is probably the best known of all, and its tawny yellow sport, Miss A. Holden, is also good. Miss Chrissie, bright terra-cotta, is quite brilliant while the flowers are young. Marguerite is very free, pure white, medium size, the flowers somewhat rough in form, but very useful. Buttercup bears many flowered erect sprays of rather small, round flowers, buttercup-yellow in colour. Emily Wells is one of the very best, bright rose, medium-sized flowers that stand erect on long sprays. Prolific is rather large. The flowers, which open blush-coloured, mottled with white, soon change to a paler hue, and are then very much like those of Mary Anderson in form and colour, but larger. This is a very free variety. With Snow Wreath I am disappointed; it looks like a bad seedling of Avalanche, and should not be classed as a

single, as it has several rows of petals. Snow-drift is a useful white variety. For those who like very dark crimson Annie Tweed will prove a charming variety, very much like Mary Anderson in habit, form, and size. Useful late varieties are Admiral Sir T. Symonds and Kate Williams, both large-flowered yellows. Mrs. A. E. Stubbs, creamy white, of good form, with fairly long, narrow-pointed petals, and Best of All, a small-flowered lilac variety, which is the latest of any I have grown, are also good.—J. C. TALLACK.

—Some of the single-flowered Chrysanthemums are used at Kew for planting in the open border or in beds, particularly those old varieties Mary Anderson, Miss Rose, and Mrs. A. le Mout. The first two are different shades of blush or pale pink, while Mrs. A. le Mout is a bright amaranth-crimson. It was sent here from the United States in 1885, while the other two were sent out by Mr. Cannell at much the same date. All are of good sturdy growth, with small or medium-sized flowers borne on firm stalks, so that they are but little affected by wet or wind.—T.

BORDER CHRYSANTHEMUMS AT CHISWICK.

HAVING watched the development and ultimate flowering of a goodly collection of so-called summer-flowering Chrysanthemums during the present season in the Royal Horticultural Gardens at Chiswick, it has occurred to me that such information as these afford may interest those of your readers who cannot frequently visit the society's gardens. This year the collection has been grown on the south side of the great vinery in the long border adjacent thereto, but separated from the vinery border by a broad gravel path. The plants are set out usually two of each kind and at about 3 feet apart, a space that permits of very full development in each case. At the outset it may be said it is no year to judge this flower in the open, but as a set off against such a remark is the fact that the collection referred to is under one and the same treatment. Remembering also that we have now experienced two summers in succession both of extreme heat and drought long continued, it behoves cultivators of this section of the Chrysanthemum to look about for those varieties that are proving useful and more or less reliable as dry weather kinds. It may be taken for granted that those that do fairly under trying circumstances may reasonably be expected to do even better with more favourable conditions. Thus it is at Chiswick. Some few kinds have done extremely well, equally so in several positions; others less so, yet good for the season, and still a few others unmistakably prove of little value for the border or the garden. In some private gardens where such details as watering could be more freely or frequently indulged in, some of the kinds mentioned as of little worth may prove a success, e.g., Ambrose Thomas, which at Chiswick is quite a failure, has proved quite a success in my own case, flowering well, and with only two good soakings of water all the season. The plants of this kind at Chiswick are at the end of the border, and may have suffered from the larger tree roots near. I have no knowledge as to how the Chiswick border was prepared and how it was manured and so on, but the ample space afforded each plant should at least have gone a very long way to making them a success.

Of those I noted, the following are good in each and every instance: Vicomtesse d'Avene, reddish lilac, 2 feet, early, very free; M. E. Lefort, orange and gold, 2 feet, early, free, sturdy; Jacintha, 1½ feet, white, lilac tinted with age; Mignon, 1 foot, gold; American Star, 2 feet, white and lilac, a great bloomer; Salter's Early Blush, very early and free; Fred Pele, crimson pompon, 2 feet; Illustration, 1½ feet, white, early. The varieties of the Mme. Desgrange section are all good, though not up to their usual form. Other good kinds are M. Dupuis, a pretty bronze, 2½ feet high, habit rather thin; Crimson Queen, 2 feet, fine bush, quite a late October

kind; Henri Yvon, reddish lilac, free, 2 feet; Nellie Brown, the sport from Ryeoort Glory and in habit a counterpart of this. Jean Vuillermet is a very attractive crimson, 2½ feet high; Ivy Stark, a fine bush, but is best with liberal treatment; Mme. Eulalie Morel, a most fascinating flower, cerise and gold, very free and excellent in habit. Ambrose Thomas is still one of the most showy, though not a success in this particular instance. Harvest Home is a fairly well known kind, and Bronze Prince is of the right colour.

The above are the best in this collection. It is necessary, however, in view of the increasing number of so-called decorative or border kinds, to call attention to what appears an error by the indiscriminate way in which all sorts are bundled into this group that are not up to standard requirements of other sections. It is obvious that the Japanese section is being largely employed by the raisers of these things as much in height and habit as in colour. Not a few of these after a feeble attempt at flowering disappear completely, leaving no trace of a cutting behind, which is perhaps the most honest declaration of their unsuitability. What is needed, and what, moreover, should be the chief aim of the raiser, should be to endeavour to obtain perfectly hardy kinds, such indeed as may be grown on in the border from year to year, and by this prove themselves of special value to the border. One of the most sturdy and hardy that I know is Mons. E. Lefort, though the flowers may not suit all. At the same time, for its hardiness, sturdy and strong habit, with freedom of flowering, it should make an excellent seed parent for future work. Nor does its dwarf habit require any support. Many kinds now being introduced are too tall—4 feet, and some even more. All such are too tall for the purpose and quickly become victims to the rough winds of late autumn. E. J.

NOTES AND QUESTIONS.

Chrysanthemums grown in Moss.—Mr. Truffant, son of the well-known Versailles nurseryman, has invented a liquid manure which enables one to grow Chrysanthemums from the cutting to the flowering stage without the use of soil of any sort. The plants, which are grown in Moss, are fed with the manure, which, it appears, contains all the nourishment necessary, throughout the whole season. A pretty little exhibit of dwarf plants in Moss, in pots, which had received this treatment, was set up at the Lyons show by M. Delvert, the blooms all of good size and well coloured.—C. H. P.

Chrysanthemum Mrs. White-Popham.—I saw some fine blooms of this grown on plants with single stems in small pots, and it would appear that this mode suits it better than any other. The blooms each measured 9 inches by 7 inches—large enough for anything. The colour is not over bright, yet pleasing, the tints of rose and white being distinct. In form the variety differs. The blooms from early buds are recurving, with just a curl at the tip of each floret, but from late buds they have an incurved Japanese form of noble build. This latter form pleased me most, although the plants that produced them were considerably taller.—S.

Chrysanthemum Mrs. Filkins.—As a decorative variety either in pots or for cutting this is an extremely useful kind. For small vases the flowers seem better fitted than large ones. They resemble a Sweet Sultan more than anything I know, and as such they ought to find more cultivators. It would seem, however, that these thread-like Chrysanthemums have a greater future before them, for raisers are giving them some attention, and colours are being added in varied shades. Mrs. Filkins has been grown for some time in a few gardens. Those unacquainted with it ought to make an effort to obtain cuttings at once.—W. S.

Chrysanthemum M. Louis Remy.—I have seen this variety growing and exhibited on two or three occasions this autumn, and in the latter case, was able to compare it with the well-known Phœbus, and I could not help being struck with its similarity. Phœbus differs much in character in different soils and from varying buds, as do many other varieties of Chrysanthemum. As a variety M. Louis Remy is quite distinct and, as is well known, comes as a sport from Mme. L. Remy. Phœbus, for an old variety, retains its popularity among some exhibitors by reason

of its sterling qualities, but whether it will be ousted by the more recent M. Remy remains to be seen. I should not be much surprised to find them bracketed together for exhibition.—W.

Chrysanthemum General Symons.—We are sending you this morning a specimen bloom of a sport which occurred on Western King, and should feel much obliged if you could give a report on same in your next issue. The sport is of the same habit and constitution as the parent plant and goes by the name of General Symons.—F. ROBIN & Co., Balmoral Vineries, Guernsey.

*. A very pale yellow bloom, the florets closely incurving as in the parent.—ED.

ORCHIDS.

PILUMNA FRAGRANS.

THE true form of this lovely Orchid cannot even be guessed by looking at the half-starved, insect-infested plants one often sees, or by large specimens that have all the centre bare and the few good bulbs mostly hanging over the sides of the pans. When really well grown it is a very beautiful plant, its chaste white blossoms, with dense yellow eye, showing up remarkably well against the deep green of the foliage and bulbs. Healthy newly-imported or semi-established plants may easily be kept going and increased in size annually, but those which have been ill-treated for years in Orchid or other plant houses have lost all the vigour they ever possessed, and only on rare occasions do they revive and make good plants. The reason in most cases is that they have lost their power to produce roots, or at least in sufficient quantity to re-establish them properly. Healthy specimens, on the other hand, produce roots freely, and in consequence get a capital hold on the compost and flourish accordingly. Given a strong plant fresh from an importation, this should be thoroughly cleaned and most of the loose scaly sheaths removed. Avoid injury to the rhizomes and the old bulb bases, as these often produce breaks that make a well-furnished plant, and it is difficult at times to say with certainty whether a bulb is really dead or only badly shrivelled. By the time they are well plumped up and fit for potting one may generally tell with more certainty which is good or otherwise.

Give them room in the pots, but avoid a great depth of compost, and allow a quantity of large rough lumps of crocks and charcoal to encourage free root action. A surfacing of Sphagnum Moss kept just moist prevents the necessity for very frequent watering, and is advisable, as the latter tends to fine down the compost, before the roots have obtained a good hold of it. Respecting the supply of water to established plants, there are few Orchids that like more than this, always provided the compost is in good order as described above. At no time should the compost be really dry for any considerable time, but especially when growth and roots are both active. The bulbs once shrivelled, the roots soon follow suit, and the plants are then in a bad way. P. fragrans likes a little more warmth than is afforded in the Odontoglossum house, and if no intermediate house exists it is better with the Cattleyas than here. The gentle warmth keeps the roots on the move in winter and prevents that stagnation of the plants noted above. It is a mistake to leave them too long without repotting. Pilumna fragrans is also known as Trichopilia fragrans, and there is a variety called nobilis with larger flowers than the type needing exactly the same treatment.

Calanthe vestita luteo oculata.—This is generally preferred by florists and Orchid growers

to the variety with crimson eye, and it is a very chaste and beautiful Orchid, as are most kinds in which yellow and white are combined. But few are so generally useful as this. The health of the plants is often endangered by standing them about in cold, draughty houses or corridors when in flower. It is a heat-loving plant and cannot endure such treatment, especially when to this is added careless watering. These items of mismanagement often lay the foundation for an attack of the black spot in the bulbs.

Repotting Thunias.—Although there is no hurry as yet, the Thunias should be carefully watched after they show any sign of starting at the base and, when convenient, repotted. They need not, of course, be watered, but it is very bad policy to wait until the roots are starting before repotting and then to bruise and damage these in the operation. They cannot, in short, be potted too early, and as the present is a dull time for this kind of work, they may be attended to and time saved later on. The plants like a substantial medium to root into, good loam with a little chopped Moss and peat-fibre answering well.

Dendrobium aequum.—This would not be thought much of in the middle of the Dendrobium season when the handsome deciduous kinds are at their best, but just now it makes a variety, and it is really not without merit. It is of semi-pendulous habit, this suiting it for basket culture, and the stems are about a foot and a half in length, the upper parts of which are covered with the flowers, produced in pairs. The sepals and petals are creamy white, the lip having a yellow blotch. Like most of its section, it delights in ample light, heat, and moisture while growing, with a distinct resting season.

Back-breaks in Orchids.—The practice of cutting partly through the rhizomes of pseudobulbous Orchids to cause them to throw back-breaks is well known as a means of propagating rarities and improving existing specimens, but it is often done at the wrong time, *i.e.*, just as the plants are commencing to grow. It is far better to do it in late autumn; then the basal eyes have the winter in which to swell up, and the breaks are early and in season. Late breaks are weak and often do not ripen up properly with the older bulbs, but are still growing when other parts of the plant are at rest. There need be little fear on the score of the parent plant, for if this is of sufficient strength to bear the operation at all, it will do so now just as well as at any time.

Sophranitis grandiflora.—In dull, cold weather, when outside all is dull and gloomy, the glowing blossoms of this pretty Orchid have an added charm. They are very large for the size of the growth, and as the pseudo bulbs at the time of flowering are often only partly made up, it is important that the plants are well treated and not allowed to stand about in draughty or dry living rooms or conservatories. Well-flowered plants have a very beautiful effect among white-flowered species, or, indeed, among almost any other Orchids, a group of which they brighten up in a wonderful manner. Any moist and well-ventilated house a little warmer than that where the coolest section thrives will suit it, but the roots need very careful treatment and must not be kept too long without fresh compost.

Cologyne cristata in winter.—I quite agree with "B. S." (p. 371) that it is a great mistake to withhold water from this useful Orchid in winter, but it will not always prevent shrivelling to keep the roots moist. There is one form of *C. cristata* with round pseudo-bulbs that is a good deal easier to keep in a plump state than the later flowering form with oblong ones. Why this is so it would be difficult to say with certainty, but I think that the fact of the pseudo-bulbs occurring at much greater distances on the rhizome, and being therefore farther from the compost, may have a little to do with it. Any way, the fact remains that you may have the two plants standing next to each other and treated identically, and the one will shrivel while the other keeps plump. Again and again I have

warned cultivators against drying their plants, but one is constantly coming across specimens so treated.—H. R.

Odontoglossum Edwardi.—The plants of this fine species are now pushing up flower-spikes, and it is well to see that the temperature in the house wherein it is grown is kept steady, and not allowed to fall below 50° at any time. Again, the spikes are apt to be bent by coming into contact with the leaves when in a very young state, and if by a little manipulation they can be given a straight course it is all the better for them, as when once lost they can never regain their characteristic shape. The tips of the spikes, too, are apt to come into contact with the glass and be disfigured. Keep the roots fairly moist, and if green fly attacks the spikes remove it at once with a damp sponge, or the flowers will be ruined. The peculiar violet-purple tint of the flowers of this species makes it quite distinct from all others.

Angraecum sesquipedale.—The beautiful pure white blossoms of this species are now open, and where sufficient specimens are grown the display will go on for several months. Although the plants grow rapidly and show a marvellous greenness of leaf when in a hot, moist, and shady house, there is no question that flowers are more freely produced when the plants are given a slightly drier condition of the atmosphere and ample sunlight. This paucity of flowering in plants heavily shaded has often been noted by those who have seen the plants growing naturally, and it is just the same with cultivated specimens. Root moisture in abundance it likes without a doubt, and the more the roots are encouraged to ramble about over the stages or elsewhere the better it is for the plants, though, of course, it will be awkward to remove such specimens. Good Sphagnum Moss and large lumps of charcoal and burnt clay are the best compost.

Sobralias.—These are fine now in many collections, and the large *Cattleya*-like blossoms are very beautiful against the handsome foliage and stems. The typical *S. macrantha* is still one of the best, and many of the white and yellow forms are chaste and lovely Orchids, the blossoms following one another in quick succession. Though many are of tall habit, there are several with stems only a couple of feet or so in height, and these are beautiful plants where the houses are not large enough to admit of the tall growers being admitted. The culture is so easy that the merest tyro in Orchid growing may take them up with every prospect of success. They like plenty of root room and a compost consisting of good fibrous loam, leaf-mould, peat, and chopped Moss in about equal proportions, adding some rough lumps of charcoal and crocks. Drain the pots well, and allow the surface of the compost to come well below the rims, as the roots need abundance of water during the growing season. The cool end of the *Cattleya* house will be found a suitable position, taking care that ample light, but not direct sun, reaches the plants.

NOTES AND QUESTIONS.—ORCHIDS.

Lælia pumila.—I recently saw this charming little species in fine condition at Fir Grange, Weybridge. In this *Lælia* the rich colour of the lip is particularly noticeable, and a plant bearing a dozen good blooms is very effective. This species, being of such lowly growth, is evidently best suited when hung up near the roof. At Fir Grange it is treated in this way, so that the young growths are fully exposed to light and a free circulation of air.—J. C. B.

Cattleya labiata at Fir Grange.—This very useful *Cattleya* has been making a brave show for some time past in Mr. Bilney's garden at Weybridge, the flowers being high in colour and freely produced, one spike carrying nearly a dozen well-developed blooms. For brightening the Orchid house at this time of the year this *Cattleya* is invaluable, and one may truly say that it is indispensable wherever Orchids are cultivated. It evidently enjoys the treatment it gets at Fir Grange, the growth being very stout and the leaves having

that healthy hue which characterises this family when in the enjoyment of congenial conditions.—J. C. B.

Vandas at Weybridge.—*Vanda coerulea* is grown well at Fir Grange, Weybridge. The flowers have that exquisite clear blue shade that distinguishes this Orchid in its best form. The plants get the benefit of abundant light, the house in which they are grown facing south with good ventilation. In a close, stuffy atmosphere and where the plants are grown far from the glass, the flowers are sure to be deficient in that fine blue tint that renders this *Vanda* so attractive. Associated with it is the imposing *V. Sanderiana* to which in colour it forms a remarkable contrast.—J. C. B.

STOVE AND GREENHOUSE.

POTTING PLANTS IN WINTER.

MANY plants may be repotted during the winter, and by so doing it will relieve the work in spring when so many things need attention. In potting during the winter there are several important items to which particular attention should be given. It is, perhaps, owing to the omission of these details that plants suffer when disturbed in cold weather.

The first thing is to see that the soil is in good condition. It should be prepared some time before use, and for plants taken from warm houses it should be warmed by some means. There is nothing more destructive to the young and tender roots than putting them into cold soil. The result is that the points which should penetrate the new soil are destroyed, and consequently the plants receive a check, besides which the new soil may get sour before the roots can make a fresh start. I have, on examining sickly plants, found that the roots (which were perfectly healthy at the time of potting) had every appearance of having suffered as suggested above.

With regard to condition of soil, it should be rather dry than otherwise, but if as near as that of the plants to be potted all the better. Sufficient attention is not paid to the condition of plants with regard to moisture. If the ball is too dry it is difficult to wet it through properly afterwards, and if too wet it is liable to get pressed up and prevent the roots getting away freely. Another important point is to avoid exposing the plants to a cold draught or to leave them about in the potting shed longer than is absolutely necessary. This and taking them from one place to another are a great source of danger. With regard to watering, I like to settle the surface by using a fine-rosed can, giving later sufficient water to pass through. This may be done a day or two later, according to circumstances. If the pots are new and they are quite dry, they should be moistened before they are used.

Attention to these small details will conduce towards success at all times and with all plants, and though a little more liberty may be taken in warm weather, it is absolutely necessary to use the greatest care when dealing with tender plants in winter. A. HEMSLEY.

Cyclamens.—A splendid exhibit of the best forms of Cyclamens by Messrs. Sutton at Manchester only helped to accentuate the poorness of the so-called *C. Papilio* shown by the same firm and others; not that the plants were worse grown or flowered, but the ragged edges and curious form of the flowers gave one the impression of indistinctness, and the general effect of the groups was ragged and poor. I noticed that Messrs. Sutton had judiciously left a wide gap between their plants of this and those of their best selected types of such well-known and beautiful varieties as Vulcan, Salmon Queen and the giant white, crimson and pink forms, all of which threw their well-formed flowers well above the foliage. All

the Cyclamens exhibited by Messrs. Sutton were young plants flowering for the first time, and were models of good culture under the express system now in vogue by most growers, for they looked almost too big for the 5-inch pots which they occupied.—J. C. TALLACK.

Begonia Dregei.—Though an old inhabitant of gardens and useful for flowering during the last months of the year, this is not often seen. A group exhibited by Messrs. Sutton at the Manchester Chrysanthemum show recalled it to my mind. The plants in this group were very healthy and covered with their small white blossoms, while the leafage was also ornamental, the leaves reminding one of those of *B. weltoniensis*, though they are smaller and rather more angular than those of this variety. It is an ideal plant for the front row of a group, as it is a dwarf grower and the habit is sufficiently bushy to enable the plants to quite hide the pots. Though generally propagated from cuttings, this *Begonia* is far better when raised from seed, as the seedlings come true and do not assume the stunted habit that cutting-raised plants sometimes do. *B. Dregei* is specially interesting just now as being one of the parents of the popular *B. Gloire de Lorraine*.—J. C. T.

Begonia Gloire de Lorraine.—This has now quite taken its place as one of the most popular of winter-flowering plants and is a very beautiful one. At the Bury St. Edmunds Chrysanthemum show recently some very good plants were shown by several exhibitors, a fine lot coming from Mr. R. Burrell, of Westley Hall. The plants were very well grown indeed and, as usual, profusely flowered. It is usual to propagate this by stem cuttings, but Mr. Ingram, the grower of these plants, informed me that he got much better results from rooting the leaves in the same way that *Gloxinias* and similar plants are propagated. The plants, he says, break more freely and are not so likely to damp when repotted—a source of trouble to many growers. At least if it has no other benefit, this method will prove a very rapid mode of increase, and I should say that the young plants would not run so quickly to flower, which would be a decided advantage. At any rate it should be worth trying, and I should like to hear what other growers of this fine plant have to say upon the subject. As a rule, I think the difficulty has been not so much in rooting plants as in getting nice healthy cuttings without flower-buds. The small leaves would probably not produce more plants than could be left in one pot, and shifted on they should make nice bushy stuff.

Begonia Caledonia.—Under the above name Mr. Forbes had at Manchester several plants of the new white *Gloire de Lorraine*, and the plants must have been in much better condition than were those recently exhibited at the Drill Hall, for though the leaves were paler than those of the type, they looked healthy enough, and the puleness was only what one might expect from a white-flowered variety, while they had nothing of the drawn appearance noted in the reports of the plants first exhibited. I see no reason why it should not be well grown under the same conditions as suit the parent form, but it is questionable if it will ever be so useful, as, though the younger flowers were perfectly white, those which were older were slightly dingy on the outside of the petals, so that large plants carrying many flowers would not show the absolute whiteness desirable unless they were staked up and stood well below the eye on the one hand, or hung well overhead and allowed to droop naturally on the other. They should not be staged or hung in the direct line of vision. Of course, one must allow for the injurious effects of travelling a long distance and for changes of temperature, and I have no doubt that the plant will become popular, for I do not see that it can be much improved on as a white variety, and the slight defect alluded to above is only what one would expect in a flower so delicate in texture. Undoubtedly the bright colour of the parent form has as much to do with its popularity as its freedom of flowering, coming

as it does in the duldest months of the year.—J. C. TALLACK.

Tibouchina macrantha.—Comparatively few readers would recognise that old favourite, *Lasiandra macrantha*, which is on p. 387 referred to under the name of *Tibouchina*. These changes in nomenclature which are continually taking place are often a source of endless trouble and confusion. With an extensive library at one's command these changes are not of so much account, but where limited means exist they cause a great amount of worry. Whether known by the generic name of *Lasiandra*, *Pleroma*, or *Tibouchina*, there can be no doubt as to the great merits of the plant in question, which each recurring autumn forms a most attractive feature trained to the roof of No. 4 greenhouse at Kew. The coloured plate of this plant which was given in *THE GARDEN*, August 5, 1893, was drawn there. It was formerly regarded as essentially a stove plant, but Kew has shown us that a warm greenhouse exactly meets its requirements. A near relative is the charming *Pleroma elegans*, a compact, upright-growing shrub from the Organ Mountains of Brazil, which was introduced more than fifty years ago by William Lobb. The flowers of this are of an intensely rich bluish purple tint and a little over a couple of inches across. Unfortunately, it is a difficult plant to cultivate.—H. P.

EUPHARIS AMAZONICA.

I TAKE it that "H. R." has some special object in his treatment of the above so that "the great bulk of the blossoms will be produced from the end of July until September." It should, however, be at least remembered that for general value as much as utility not many will be desirous of getting the great bulk of blossoms at such a time. During the stated months the variety of choice flowers is great, and with such *Lilies* as *L. longiflorum* vars., *L. speciosum* vars., *Tuberose* grown cool, and a host of hardy flowers, there is certainly less need for *Eucharises* during the summer months. It is a curious fact, but the time stated above is that at which market growers try not to have the *Eucharis* in bloom. This is for a two-fold reason: Trumpet *Lilies* (*L. longiflorum*) abound, with *Gardenias* in plenty also, and *Eucharis* flowers in hot weather so quickly become transparent. Assuming the idea is that of less heat for these things, it certainly does not follow that the greatest value is secured by giving the *Eucharis* the cooler treatment "H. R." speaks of. Where batches of *Eucharis* are grown for maintaining as near as possible a constant supply of bloom, a July flowering is favoured for but one reason, viz., that with proper care this very batch is regarded as reliable for flowering in January and early February ensuing. For the sake of the latter the former crop is often sold at a sacrifice, the two together, however, making a fair average. So far as potting the *Eucharis* is concerned, particularly in regard to its efficacy, it is usually overdone. I have now in mind a large houseful of bulbs placed in 10-inch pots two or three years back. With warm treatment the bulbs quickly filled the pots, and now for nearly two years have become so vigorous, that the pots are no longer capable of the strain, and a whole pot is hardly to be found in some hundreds. The result is the bulbs protrude, and many nearly rest on the stage. The soil also is virtually used up and the foliage much paler than many would care to see. But the crops of flowers and the great vigorous spikes all come as of yore, except for the increase due to increasing bulbs; indeed, it is a mystery the plants flower so well. I am not suggesting that this mode of growing *Eucharis* should be copied; at the same time it proves how greatly such things are benefited and, indeed, sustained by proper atmospheric conditions and when the bulbs are up to flowering size. The greatest enemy to the *Eucharis* is not the mite, but the man and the water-pot. Given warmth and atmospheric moisture, and according to season a judicious use of the syringe, it is surprising how really little

root water is needed. But there must be no lack of moisture in the air. Nothing is more essential than this, and nothing is more fatal to good results than continuously wet soil or imperfect drainage. With the pots exposed to the warm inside conditions the plants much longer remain healthy than when given bottom-heat. Where thousands are grown, this latter is quite impossible. E. J.

Lilium longiflorum from Japan.—From Japan we now receive immense numbers of *Lily* bulbs, and whilst many species are represented amongst them, by far the larger number consists of *L. auratum* and its form, *L. speciosum* and *L. longiflorum*. The importations of this last have now attained such proportions that they must materially affect the Bermuda-grown *Lilium Harrisii*. True, these last reach here towards the end of July and in August, so that for early work the Japanese bulbs do not affect them in the least, but later on the case is very different. The greater number of these bulbs from Japan consists of a very good form of *L. longiflorum*, which, when less plentiful than it now is, used to be called *Wilsoni*. That grand variety *giganteum* is also largely imported, while *Takesima*, in which the stems and unopened buds are tinged with chocolate, is grown to a certain extent. For outdoor planting these Japanese bulbs are particularly valuable, as they usually reach here in a firm, solid state, and may be planted at once, or, if preferred, may be kept sound in slightly moistened soil for some time. Valuable as they are for planting out of doors, a great many of the huge importations disposed of in the London auction rooms are bought up by some of the large growers for Covent Garden Market and potted up in order to form a succession to the Bermuda *L. Harrisii*. Their season of blooming when grown in pots will depend altogether upon the treatment given them, as they are very amenable to gentle forcing and may be had in bloom in early spring; or grown cooler, they can be kept back till summer is well advanced. Of late years bulbs from South Africa, though limited in number, are valuable for prolonging the flowering season, as they usually reach here in a dormant state in April or May.—H. P.

NOTES AND QUESTIONS.—STOVE.

Justicia calycotricha.—This is an old-time popular plant, but now not often met with. Like many other *Acanthads*, it branches but sparingly, and the flowers are borne in terminal heads. In this the blossoms are of a canary yellow colour, while the segments of the calyx are long and hair-like, thus giving to a head of blossom an uncommon, fluffy appearance. It remains some time in bloom, and is valuable from the fact that it flowers in midwinter. This *Justicia* is a native of Brazil, and was introduced in 1824. It is also known as *Schaueria calycotricha*.—T.

Rhododendrons in flower.—After a week of almost incessant fog, the various members of the Javanese section of *Rhododendrons* are flowering with great freedom, being, in fact, quite unaffected by the atmospheric conditions experienced of late. Few, if any, classes of plants are so valuable for autumn and winter-flowering within the London area, as sulphur-laden fogs—the bane of the plant grower—do not injure the expanded blossoms or the unopened buds. True, some of the bright-coloured flowers are at this season rather paler in tint than when they expand under more favourable conditions, but this is of little importance. The lighter hues are as clean and fresh as ever.—H. P.

Jacobinia chrysostephana.—Among the more uncommon winter-blooming plants this merits extended cultivation, as its flowers are particularly valuable during this dull season of the year. The flowers, which are borne in a terminal head, are of a curved tubular shape. The exterior of the tube is a bright orange, while the expanded mouth is of a rather lighter tint. It is a native of Mexico, was introduced in 1870, and is often met with under the generic name of *Cyrtanthera*. Given ordinary stove or intermediate house treatment, it does well. The plants must not be stopped too much, as the object is to obtain good vigorous shoots which can be depended upon to each bear a crown of golden blossoms. It is now in bloom in the T range at Kew.—H. P.

TREES AND SHRUBS.

THE BAMBOOS.

THERE are some fifty species and varieties of these graceful plants which have proved to be hardy in all but the most exposed and coldest parts of our island. Of hardy Himalayan Bamboos we have only *Arundinaria* (*Thamnocalamus*) *spathiflora*, *A. aristata*, and *A. racemosa*, for *Thamnocalamus* (or *Arundinaria*) *Falconeri* and *Arundinaria falcata* are invariably cut down by severe frost. *A. macrosperma* is the one species which comes to us from the United States of America, and although the Andes and the Himalayas have in all probability many Bamboos which will, when they are introduced, prove perfectly hardy, we have at present in the main to depend upon the *Arundinarias* and *Phyllostachys* of China and Japan for the beauty which is to be obtained from these giant grasses. Nor can we complain. Grace and

our biting easterly and north-easterly winds. They are more deadly than frost. The softer and moister westerly winds, blow they never so hard, will do less damage to plants which come from such storm-vexed regions as the coasts of China and the islands of Japan. It is very important that every autumn the plants should be well mulched with cow manure, and this again should be covered with dead leaves. To prevent the latter from blowing away it is expedient to surround the plant or group with wire netting. This has the additional advantage of keeping out rabbits and hares. The mulching protects the roots from frost in the winter and prevents evaporation in summer. When the plants are thoroughly established these precautions become unnecessary, and they may be left to shift for themselves.

But above all things I would warn my readers against planting out imported Bamboos in their permanent places before they have recovered from the effects of the journey. I

When you take the plants out of the pots be careful not to disturb the roots in any way. You must not attempt to comb them out as you would the roots of trees, for they are as brittle as glass; place them in the earth as they are, and they will soon find their way about. If possible the newly-planted Bamboos should be well watered during growth. It must be remembered that Bamboos will not show their true characteristics for several years. But by taking the above precautions much time will be saved and many disappointments avoided. For transplanting Bamboos (from one part of the same garden to another, not for sending them on a journey), May and June are perhaps the best months, though I have moved them without any ill effects during the whole summer up to the end of September. The worst time is from November to March, for the plants need to have made some roots in their new homes before they can resist our cold winters and biting spring winds.

As regards propagation, very little need be said here, for I doubt whether the propagation of hardy Bamboos, except by division, is likely to become a successful industry in this country.

PROPAGATION BY DIVISION.

The best moment for this operation is, in our climate, the latter end of April or May. The process is very simple. The plants should be divided into clumps of two or three culms with their rhizome, in order to ensure a new growth from the buds on the internodes of the root-stock. If the tufts can be lifted with a ball of earth, so much the better. They should be planted in beds at distances of 2 feet, carefully watered, and protected by a top-dressing of well-rotted cow manure and dead leaves. With the same care they may be planted at once in their permanent homes.

In this account of the hardy Bamboos, so far as they are at present known, I have marked

with an asterisk those species which, from their beauty and hardness, are best worth cultivating in this country.

NATIVES OF THE HIMALAYAS.

ARUNDINARIA FALCATA. — A beautiful plant which dies down every year in this country as it does under the snows of the Himalayas. In the temperate house it does not lose its leaves or stems, but remains perfectly green. New culms come up from the base in the following summer. Often confounded with *Thamnocalamus Falconeri*, from which it differs mainly in having a far longer ligule to the sheath. The stems are yellowish green, very slender and graceful, round, and with short internodes, the nodes being but slightly raised and of a purplish colour. The ramification is close and thick. The leaves are of a fine green colour, paler on the lower surface, and about 5 inches in length and striated. Not to be recommended for general planting.

ARUNDINARIA (THAMNOCALAMUS) FALCONERI, even more tender than *A. falcata*, is cut down by



Bamboos in England (*Phyllostachys nigra* at Gunnersbury House). From a photograph by G. Champion.

elegance are the characteristics of the Bamboo, and in no genus are these more conspicuous than in the lovely group of *Phyllostachys*, while some of the *Arundinarias* will, if planted in suitable places, grow into dense thickets of almost tropical aspect. There are few gardens in which some sheltered nook, backed by evergreens, might not be beautified by a feathering group of *Phyllostachys Henonis* or *nigra*; while in the wilderness glorious effects may be produced by the grand foliage of *Arundinaria Metaké* or the stately plumes of *Arundinaria Simoni*. Background is the great secret of getting the best effect out of plants in which beauty of form is the dominant feature. By the side of a stream, on the banks of a lake, among the rocks cropping out of the hill-side, the Bamboo is thoroughly at home. If such a place can be found with rich soil and under the influence of the sea-air, so much the better. Above all let the Bamboos be sheltered from

have myself lost many fine specimens in this way. Now that a sad experience has taught me how to treat them I rarely lose one. The plants should only travel during the period when they are at rest. They will be received, therefore, during the late autumn or winter. If they have come from abroad, the balls of earth round the roots should be thoroughly soaked; they should then be potted and placed in a cool house for the winter; the leaves should be copiously syringed with rain-water twice a day, but the roots should not be kept too wet. In this way many species will keep their leaves as green and fresh as if they had never been disturbed; but even those that lose their leaves will early in February begin to show little fat buds that will soon develop into branchlets. Early in May begin to harden off the plants, as you would *Geraniums* for bedding out, and at the end of May place them in their permanent homes.

frost every year in most places. The habit is less vigorous, the leaves smaller, and the stem more slender and of a brighter green. Leaf-sheaths and blades glabrous. Leaves striated. The confusion between these two species has been very general. The majority of the plants hitherto cultivated in this country as *A. falcata* have proved to be *Thamnocalamus Falconeri*. Mr. Osborne, gardener to Mr. Smith Barry, at Fota Island, County Cork, informs me that the late General Munro identified the specimens grown there under the former name as true *Thamnocalamus Falconeri*. The so-called *A. falcata* flowered in the gardens of the Luxembourg, in the south of France, and in Algiers in 1876. Mr. Smith Barry's plants flowered and seeded at the same time; it is, therefore, possible that the mistake in nomenclature was universal, and that all these plants were indeed *Thamnocalamus Falconeri*. As regards the hardness of the species, Mr. Osborne writes as follows: "The above-named Bamboo (*Thamnocalamus Falconeri*) throws up numerous canes here from 20 feet to 25 feet. I have often wondered at the reports in gardening papers in England of its sending up canes from 6 feet to 8 feet high, but, unfortunately, I have learned the reason this season. We had an unprecedented sharp frost in January last (1894) which killed the tops of all the *Thamnocalamus*, with the result that, instead of throwing up a few monster canes to the height mentioned, they have thrown up numerous small canes about 6 feet or 8 feet high around the old stools. It must take several years of very mild winters before they reach their usual strength. Many other Bamboos were not in the least injured, so far as I could judge. The frost registered at Fota was 26° Fahrenheit below freezing point." From this it is evident that the species is not thoroughly to be depended upon even in the usually warm climate of the west of Ireland. How it fared in Devonshire and Cornwall, where there are, or were, many fine specimens, I have not heard. Messrs. Watson and Bean consider the *Bambusa gracilis* of the French cultivators to be identical with *Thamnocalamus Falconeri*. I can detect no difference between the two.

A. RACEMOSA.—A low-growing *Arundinaria*, growing as high as 15 feet in its own country. Stem smooth and round. Internodes about 2 inches apart, leaves 2 inches to 4 inches in length and narrow, cross veins well defined. After the trying winter of 1895, quite green and fresh at Kew Gardens. Found at an elevation of 12,000 feet in the N.E. Himalayas.

A. ARISTATA.—A pretty *Arundinaria* of moderate size, with purplish stems and tessellated leaves. This latter quality, taken in conjunction with the great altitude at which it is found in the North-Eastern Himalayas—as high as 11,000 feet above the sea-level—indicates it as a hardy Bamboo.

A. (THAMNOCALAMUS) SPATHIFLORA.—Another hardy Bamboo with tessellated leaves from the Himalayas, where it is found at an altitude of 9000 feet. Most of the specimens which I have seen grown under this name in English gardens are not the true *A. spathiflora*.

NATIVE OF NORTH AMERICA.

A. MACROSPERMA.—The solitary species of the United States of North America. This Bamboo appears to vary in height according to its habitat—in the Southern States from 10 feet to 35 feet high, while in the north it does not exceed 10 feet. It is the *Arundinaria* described by Michaux. The stems are round (sometimes slightly flattened on one side at the point of branching), slender, and much-branched. The sheaths are purplish in colour, very persistent, and fringed at the top with a few rather coarse hairs, the leaves about 7 inches long by 1½ inches broad, the upper surface smooth, the lower downy, having the edges slightly serrated—very partially on one side. Interesting rather from the fact of its being the one representative of the family in the vast area of the United States of North America than from its beauty. Some botanists divide the taller and

shorter varieties into two species, but Munro treats them as identical. M. Marliac sends out a Bamboo under the name of *Bambusa Neumannii* (it is called *Hermannii* in the botanic gardens at Brest) which appears to be the same plant as *A. macrosperma*; indeed, both M. Marliac and M. Blanchard, the director of the Brest gardens, so regard it, although they do not know from what country their Bamboo was originally received. The shrubby form, *A. macrosperma suffruticosa* or *tecta*, is the variety grown at Kew and here. It is a very active runner, and demands plenty of space.

NATIVES OF CHINA AND JAPAN.

**A. FORTUNEI*.—Three plants of no relationship to one another are at present the bearers of this name, respectively green, silver variegated, and golden variegated. As there is absolutely no similarity between them, I have re-named two of them *humilis* and *auricoma*, leaving the name *Fortunei* to the silver-striped species which has the prior claim to the title.

**A. HUMILIS*.—A green species, about 2 feet to 3 feet high, looks as if it might in time grow a few inches higher. The stem is round and green, the nodes not much raised, the internodes 3 inches to 3½ inches in length. Ramification in threes, and long in proportion to the stem and internodes. Habit erect. Bright evergreen leaves, smooth on both sides, 4½ inches long, three-quarters of an inch broad, and tapering to a point. Petiole inconspicuous; sheaths reddish, hairy at the end and sides, and terminating in a true leaf; very rampant root-stock. A very pretty plant to form a carpet. Syn., *Bambusa gracilis*. Messrs. Veitch, of Chelsea. A native of Japan.

**A. FORTUNEI FOL. VAR.*—A silver variegated dwarf Bamboo about 3 feet high. Stem round, green, and erect, but rather more zigzagged than the green variety. Nodes not very prominent, sometimes hardly perceptible; internodes about 2 inches, long ramification, mostly in pairs. Leaves about 5 inches long, by half or at most three-quarters of an inch wide; a bright colour beautifully striated with white in a young state, but the variegation is apt to fade in the older leaves, which become rather spotty. Very short petiole; sheaths hairy, terminating in a leaf; loses its leaves in winter, but is, nevertheless, a beautiful plant in summer, and should be cultivated; a strong runner at the roots.

**A. AURICOMA*.—A golden variegated dwarf Bamboo, taller than the two preceding sorts, rather over than under 3 feet high; stem round and erect, with a purplish green colour; nodes inconspicuous; internodes about 2 inches. Leaves striped with bright yellow, from 5 inches to 7 inches long by 1 inch to 1½ inches broad, very pubescent, like velvet on the under side, slightly pubescent on the upper surface. Short petiole; purplish green sheaths, very hairy at the sides, ending in a leaf. Not such a strong runner as the two preceding kinds, but a beautiful and conspicuous evergreen plant.

**A. MAXIMOWICZI* (Marliac).—A golden variegated dwarf Bamboo, probably a synonym of the last species. I can detect no difference between them. The name is sometimes given wrongly to *A. Simoni striata*.

**A. CHRYSANTHA*.—A dwarf variegated Bamboo, probably a variegated form of *A. humilis*. Differs materially from *A. auricoma*, inasmuch as the lower surface of the leaf is markedly ribbed and lacks the velvety down of the latter species; on the other hand, the down on the leaf-sheaths is very conspicuous. For beauty it is not to be compared with *A. auricoma*; it is far less brilliant, and the variegation is somewhat muddy and uncertain, a great portion of the plant being quite green. It is a very free runner, but has little else to recommend it, unless it be for a collection.

**BAMBUSA PUMILA* (? *Arundinaria*).—A very pretty dwarf Bamboo. At first sight this would strike the observer as *A. humilis* under another name. It is, however, I think, certainly a distinct species. It is smaller in habit, the leaves are less

broad, shorter, and do not taper so gradually to a point. The teeth of the serrated edges are less conspicuous. The lower sheaths are hardly so hairy, and the nodes are less well defined and far less downy. The stem is more slender.

**A. HINDSI*.—A distinct and beautiful species sent out by French nursery gardeners under the name of *Bambusa erecta*. With me it has grown to a height of about 9 feet, but will evidently attain a greater stature. It was described by Munro from a fragment of the top of a culm, only 18 inches long. His description is therefore incomplete. The stem is round and very straight; the internodes are about 6 inches long, but much shorter towards the top (Munro, therefore, having only seen the top, makes them 2 inches to 3 inches). The young dark green stems have a lovely white wax on them like the bloom on a Grape. The branches are quasi-verticillate and erect. The sheaths, which are very persistent, are slightly hairy on the top. The leaves are 6 inches long by about five-eighths of an inch across, slightly serrate and hairy, especially on one edge; they are thicker than in most Bamboos. The colour is a beautiful dark green, fairer underneath; the veins are more conspicuously and beautifully tessellated than in any Bamboo that I have observed. The Japanese name is *Kanzan-chiku*.

**A. HINDSI VAR. GRAMINEA* (the *Taimin-chiku* of Japanese gardens).—A smaller plant than the above, with leaves 9 inches long by five-eighths of an inch broad, and yellow stems; considered by the authorities at Kew to be another form of the same species. The tessellation of the veins of the leaves is not quite so strongly marked as in the type. Sent out by French gardeners as *Bambusa graminea*. When once established, a very strong runner.

**A. JAPONICA*.—A fine and valuable plant, generally grown in gardens under the name of *Bambusa Métaké*. The word *Métaké*, or, more correctly, *Médaké*, is Japanese for "female Bamboo," but there is no scientific reason for using the word "female" in connection with this plant any more than there is for our calling the *Dendrocalamus strictus* of India the "male" Bamboo. Grows to a height of about 11 feet or 12 feet. The stems are thick, round, and green, very straight until the branches of the second year appear. The hairy sheaths, which completely envelop the stem, are very persistent, but quickly wither, and their dead colour rather detracts from the beauty of the plant. Ramification only takes place when the stem has reached its full height, the upper nodes being the first to show signs of it. The sheaths on being forced away from the parent stem do not fall, but roll themselves round the stems of the branches. The leaves are from 8 inches to 1 foot in length by about 1½ inches, sometimes more, broad. The upper surface is smooth and shining, the lower side paler, rather glaucous and wrinkled; the edges are finely serrated. The creeping root-stock in well-established plants is very active, so that care must be taken to give the plant plenty of room. The most effective specimen which I have seen in this country is in Mr. Buxton's garden on the borders of Epping Forest, where, upon a promontory jutting out into a piece of ornamental water, it has quite a tropical appearance. It has been the fashion rather to undervalue the *Arundinaria japonica*, and certainly in a young state it is somewhat disappointing; in time, however, it makes a fine bold feature. *Arundinaria japonica* (*Bambusa Métaké*) was first introduced into Europe by Siebold in 1850. It flowered and fruited in the Bois de Boulogne in Paris and simultaneously all over France and in Algiers in the year 1867 or 1868. Under the name of *Bambusa Ya-daké*, the Japanese send out an *Arundinaria* which they claim to be *Phyllostachys bambusoides*, which it evidently is not. The name *Ya-daké* (Arrow Bamboo) is due to the straight, round culms being used for making arrows. It appears to be no more than a form of *Arundinaria japonica*; indeed, in its present young state there is no difference to be detected. Evi-

dently, however, the Japanese gardeners consider the two to be distinct plants.

**A. SIMONI*.—This, the tallest of our *Arundinarias*, was introduced into France by M. Simon, French Consul in China, and named after him by Carrière, who described the plant. At Kew old-established plants have reached a height of 18 feet. The culms are round and straight—slender in proportion to their height—during growth entirely encased in the sheaths, which are smooth and striated, with the upper part of the edges finely haired. The sheaths are at first green, shaded off to dark violet, but they soon wither, and as they are persistent they rather spoil the effect of the plant (as is the case in *A. japonica*). Here, again, ramification does not take place until the stem has reached its full height. The branches in the second year almost surround the stem which presents the appearance of a round plume. The leaves are from 10 inches to 1 foot long, slightly hairy, lanceolate, longitudinally ribbed, ending in a long narrow point. On the lower face of the

Maximowiczii. Flowered, but did not seed, in Mr. Smith Barry's garden in Fota Island, County Cork, in the year 1893. The Japanese name, *Narihira-daké* (*Bambusa Narihira*, *Marliac*), is a synonym of *A. SIMONI*. It was so named after *Narihira*, the hero of a romance of the eleventh century called the "*Isé Monogatari*," one of the classics of Japan, written in prose, with poetry interspersed. The author is not known. *Bambusa Narihira* is sent out by certain nursery gardeners as a distinct species, but this distinction is imaginary.

**BAMBUSA PALMATA* (? *Arundinaria*).—A strikingly beautiful species, conspicuous from the size of its leaves, which are often used by Japanese peasants to wrap up the bit of salt fish or other condiment which they eat with their rice. With me it is about 11 feet high, or rather more. The stems are round, but slightly flattened towards the top. The colour is bright green, but the stems are somewhat shrouded by the persistent dead sheaths. Each node, whether on the stem

humbler scale, the plant being only about 2 feet high and the leaves smaller and more rounded at the point. It has the same round stem, flattened at the top, and the same single-branched nodes. The leaf-sheaths, however, are somewhat capriciously fringed with coarse hairs. The leaves are about 7 inches long by about 2½ inches broad, green above, glaucous below, glabrous and much ribbed. The edges wither in winter, giving the plant a variegated but, ultimately, shabby appearance; but the thick new foliage of spring is very beautiful, and the plant runs fiercely, soon making a thick carpet and ousting all weeds. Sometimes sent out as *A. tessellata*, which is wrong, and often called by the Japanese *Kumazasa*, on account of its withering edges. (See the remarks on *Phyllostachys kumazasa* or *viminalis*.)

BAMBUSA SENANENSIS.—A plant was received in 1894 from Japan under this name. I cannot detect any difference between it and *Arundinaria Veitchii*. The Japanese name for it is *Yakibazasa* (the Sword-edged Dwarf Bamboo). There is another Bamboo, a tall species used for making furniture, &c., which also goes by the name of *senanensis*, and which the Japanese call *Sudzudaké* (the Reed Bamboo).

ARUNDINARIA METALLICA.—A species closely resembling *A. Veitchii*, but lacking the ugly withering of the leaf edges in winter. A native of the north of Japan and the island of Yezo. Perfectly hardy.

**BAMBUSA TESSELLATA*.—Described by Munro as *Bambusa tessellata*, but evidently, if it be correct to class the preceding species as *Arundinaria*, this should follow suit. Moreover, Munro says, "I have only seen the dried leaves of this species when sewn together and in the state so largely used by the Chinese in packing their tea." Probably had he had better opportunities he would have referred all these plants to the same genus; as it is, he gives the genus as doubtful. A very beautiful species, noteworthy as having the largest leaves of any of the hardy Bamboos. The stem is about 2½ feet high, round, slightly flattened at the top, the colour a purplish green, much hidden by persistent withered sheaths, one branch from each node (in one case only I found two springing from the same node). The edges of the sheaths are hairy at their base; leaves 18 inches and more long by rather over 4 inches wide, tapering beautifully to a point, bright green above, glaucous beneath; midrib well defined. Munro notes a tomentose line on the side of the midrib, but this is not visible to the naked eye, and a very strong lens reveals very minute hairs upon the lower surface of the living leaf, which he describes from his dried specimen as glabrous. Both edges are serrated.

Short petiole. The tessellation which gives its name to the species may be seen by holding up a leaf to the light, but as it is to be found in so many Bamboos, the name is not well chosen for purposes of identification. A feature of the plant is the pretty way in which the slender new culms spring from the carpet of arching foliage. Also known as *Bambusa* (or *Arundinaria*) *Ragamowskii*.

**ARUNDINARIA NITIDA*.—A very lovely species from North-Western Szechuan. The culms are purple-black, very slender and round. The leaves are small, lancet-shaped, and tessellated. Quite the hardest of all our Bamboos, for in the bitter weather of February, 1895, it stood as green as in midsummer. Originally sent out in error as *Arundinaria khasiana*, which is a non-hardy Indian species with striated leaves.

**A. ANGUSTIFOLIA*.—A lovely little Bamboo, about 2 feet to 2½ feet in height. The stems are round, very slender, and when young of a purplish colour. It is much branched; the leaves are about



Bambusa palmata at Castlewellan, Co. Down, Ireland.

leaf there is a distinct difference in colour on the two sides of the midrib, to which Mr. Bean has called attention; the one half is green, the other half slightly glaucous—a very curious feature. So far as experience at present goes, this is the greatest runner of all the taller hardy Bamboos. Its young and straggling shoots will appear at a great distance from the parent plant. It should be planted in a perfectly isolated position in the wild garden, where it may wander at pleasure without injury to any neighbour. So powerful an invader might easily become a nuisance instead of a beauty.

A. SIMONI VAR. *STRIATA*.—Careful observation and closer acquaintance lead me to think that any distinction between this and the type cannot be maintained. Both have a certain amount of silver-striped variegation in the leaves of young shoots, and in both it disappears with age. Is sometimes sent out by nursery gardeners under the names of *Bambusa calipta* and *Bambusa*

or on the branches, only carries one branch. The branches of the second year often overtop the parent stem. I can detect no hairs on the sheaths. The leaves are the chief beauty of the plant. They are each from 1 foot to 13 inches long and 3 inches to 3½ inches broad, tapering rather suddenly to a very fine point: the petiole is rather inconspicuous. They are much ribbed, the midrib being very prominent and glabrous. The colour is an intensely vivid green on the upper surface, glaucous on the lower. Both edges are serrated. The rhizomes are exceedingly active and travel far. A bold group of this Bamboo, with a background of Hollies and associated with Lady Ferns and such sympathetic compatriots as *Ophiopogon japonicus*, *Funkia Sieboldi*, and *Anemone japonica*, which always seems to grow best under shade, is a most effective and striking object.

**ARUNDINARIA VEITCHII* much resembles *Bambusa palmata* in its habit, though on a far

$4\frac{1}{2}$ inches in length by three-eighths of an inch in width; they are serrated on both sides, and somewhat capriciously striped with silver variegation. The leaf-sheaths are slightly hairy. This is the *Bambusa Vilmorini* of French gardeners. I have named it *angustifolia* on account of its narrow leaves.

A. NAGASHIMA (Marliac).—A dwarf Bamboo about 3 feet high. The stems are round and purplish green in colour; the leaves, which are from 6 inches to 7 inches long and three-quarters of an inch in width, are sharply serrated on both edges; the leaf-sheaths are hairy. So far this Bamboo has not developed any characteristics of especial merit, and is, perhaps, hardly worth growing, except in a collection.

***A. MARMOREA (Japanese Kan-chiku).**—I have chosen the name "marmorea" on account of the very peculiar appearance of the young stems, which are folded in purple sheaths, delicately marbled with a pinkish silver-grey, through which, near the knots, peep glimmers of the bright emerald-green or dark purple of the stem itself. The stems, which in colour are purple, shading off to a brilliant green, are very slender and round, rising at present with me to a height of 4 feet or 5 feet, but promising to grow taller. The branches cluster thickly round the stems in threes, and are much longer than the internodes, which are very short, not more than from 1 inch to at most 2 inches, so that the dense foliage has all the appearance of being verticillate, and the fully developed culm assumes the shape of a fox's brush. The leaf-sheaths are very distinct: their colouring is unlike that of any other Bamboo that I have seen; they are downy at the top, and have besides round the base a conspicuous little fringe of hairs, which seems at first sight to spring from the node; the ligule is very tiny. The leaves, which are bright green, are about $4\frac{1}{2}$ inches long by three-eighths to five-eighths of an inch broad; they are serrated on both edges, and have a marked constriction at about half an inch from the very sharp end; indeed, the leaves are so pinched in at their point that they seem to terminate, as it were, in a tongue. The rhizome is very active, new shoots appearing at some distance from the parent plant. This is altogether a unique dwarf Bamboo, as pretty as it is strange.

***A. PYGMEA.**—The best and the smallest of the dwarf Bamboos, invaluable for making a carpet of soft brilliant green. Grows with extraordinary rapidity, the root-stock travelling great distances and at a considerable depth. Stem about 6 inches to 16 inches, round, much branched; internodes very short; leaves about 4 inches long by half an inch to three-quarters of an inch broad, edges serrated, both surfaces downy, the lower surface glaucous, leaf-sheaths hairy at top. This wonderful little plant grows so thick and close, that no weed has a chance against it, but its rampant habit makes it advisable to give it plenty of room. For this reason I should not recommend its adoption for edgings, as has been sometimes advised. Being a confirmed vagrant, it is impossible to keep it within bounds.

A. LAYDEKERI.—Apparently a semi-dwarf Bamboo, not, so far as my experience of it goes, particularly attractive, though it should have a place in a collection. The stems in the third summer are about 3 feet high, but will probably grow higher; round, much branched; apparently, therefore, it is an *Arundinaria*. The leaves are about 6 inches long, dark green, but rather shabbily mottled on both surfaces, serrated on one edge and slightly so on the other; leaf-sheaths hairy at top. The branches, which are long in proportion to the length of the stems, from which they stand out rather markedly, give the plant a conspicuous habit.

BAMBUSA QUADRANGULARIS.—A curious and rare Bamboo, which owes its name to its square culms, like the stems of one of the *Labiata*, a feature which is conspicuous only when the plant has attained some size. This it has not yet done, so far as I am aware, in outdoor cultivation in this country. Though it is apparently weather-proof,

the growth is by no means rapid, and we shall probably have to wait some time before its value as a hardy plant is established. There is a good specimen in the temperate house at Kew. The stem is much branched and the branches almost verticillate. The leaves, which are of a deep green colour, are about 8 inches by 1 inch wide, serrated on both edges; leaf-sheaths hairy at top, internodes short, the nodes very markedly prominent. A very beautiful and peculiar member of the family, which it is much to be hoped will thrive with us. Runs freely at the roots. It was supposed at one time that the square shape of the culms was due to some artificial treatment, but the young stems, even in their present development, have sufficient character to disprove this. Groves of this Bamboo upwards of 30 feet high are to be seen near Osaka, the Venice of Japan.

***PHYLLOSTACHYS HETEROCYCLA.**—This very strange freak of Nature is called by the Japanese *Kiko-chiku*, or the "tortoise-shell Bamboo," from the curious arrangement of the alternately and partially suppressed internodes at the base of the stem, which sheathe it in plate armour like the scales on the tortoise's back. At about 2 feet or 3 feet from the ground the nodes are regularly defined, as in other Bamboos. It was thought at one time that this abnormal feature of the stem was due to artifice on the part of the Japanese gardeners, past masters of the art of torturing plants into all sorts of quaint shapes and conceits. But an examination of a section of *Phyllostachys heterocycla*, with its very curiously alternated septa corresponding with the outer scales, shows that the grotesque markings are the handiwork of Nature when in a playful mood. The other characteristics of this Bamboo do not differ from those of the *Phyllostachys* of the *mitis* and *aurea* group. The leaves are from 3 inches to 4 inches long and about half an inch wide, very minutely serrated on one edge and almost imperceptibly so on the other, bright green on the upper surface, bluer underneath. I believe that the first living plants of this species introduced into England were those received from Japan in 1893, though it was exhibited at the Paris exhibition of 1878, and named *heterocycla* by Carrière. The imported stems are about 5 inches round, and the plant has the appearance of growing into a large and important Bamboo.

P. MARLIACEA.—A very handsome species—evidently a *Phyllostachys*—at first sight bearing a strong likeness to *Phyllostachys Quiloi*. My plants are about 15 feet high, but promise to become much taller. The stem when freed from the sheaths is very handsome—a dark green shining like enamel: the internodes at the base are very close together, not more than $1\frac{1}{2}$ inches to 2 inches. The branches are long and graceful, leaves a very intense green on the upper surface, glaucous below, about $4\frac{1}{2}$ inches long by 1 inch wide, more conspicuously serrated on one edge. The young leaf-sheaths are purple and deeply blotched and furnished with rather long and coarse purple hairs. The habit of this Bamboo is very graceful, the culms forming the most elegant arches, beautiful both in form and colour. The catalogue of the Yokohama Gardeners' Association gives the native name as *Shibo-chiku*, the "wrinkled Bamboo." This alludes to the furrowed wrinkling of the stem, which is largely used for canes and umbrella sticks.

P. FASTUOSA.—However difficult it may be to distinguish between some of the species of hardy Bamboos, this very stately and beautiful plant stands out quite conspicuously among its fellows, having marked characteristics which are all its own. The bright green stems, heavily splashed with purple-brown blotches, are straight, very hollow, the wood being a mere shell and extremely brittle. The internodes, which are grooved, are short, only from 5 inches to 6 inches long in a stem 15 feet high; the lower end of the culm for 2 feet or 3 feet is bare of branches. The branches being four or five times as long as the internodes, erect, and much divided into branchlets, the top of the culm wears a false air of verticillation, giving the plant the appearance of an *Arundin-*

aria, which, however, the groove in the internodes and the non-persistent character of the leaf sheaths seem to contradict. The leaves are from 5 inches to 7 inches long by three-quarters of an inch to 1 inch in width, tapering to a sharp point, and markedly constricted at about an inch from the end, which has the appearance of a little tongue. Their colour is bright green on the upper surface and very glaucous underneath. Both surfaces are smooth, the lower one distinctly ribbed; both edges are serrated, but, as is frequently the case in Bamboos, the one is more so than the other; the veins are very closely tessellated. The petiole is long and well defined. The leaf-sheaths are rather thick and hairy, being a shining purple in colour on the inside face, which is highly glazed. The rhizome, which appears to be very active, is more fistulous than that of any Bamboo which I have observed. A section which I measured showed an oval hollow in the internode of the root-stock a quarter of an inch long by one-eighth of an inch broad. The stems with me are from 16 feet to 17 feet high, and rather more than 3 inches in circumference. There is every reason to believe that this Bamboo will prove to be one of the most valuable of the group. Tall, spreading, gracefully plumed with foliage, which for richness and beauty of colour is without a rival, it cannot fail to make a striking feature in the wild garden. It was first imported from Japan by M. Latour-Marliac, of Temple-sur-Lot, in 1892.

P. BAMBUSOIDES.—A name invented by Siebold and given by nurserymen, both in Europe and Japan, to many species, all of which have been described under some other title. Collectors will act wisely if they reject any Bamboos offered under this name, as they are sure to find it identical with some other species already in their possession—in nine cases out of ten some cheap *Arundinaria*.

***P. AUREA.**—The distinctive name *aurea* is not very happily chosen, for there is nothing golden about the plant unless it be the yellow stems, and these are not peculiar to the variety named. The stems are very straight and erect in this country, growing close round the base of the plant, which gives it the appearance of having caespitose roots; whereas it has a true rhizome, which in its native climate runs freely. It is seen at its best when planted in bold masses, as the individual plant by itself has too much of the shape of the birchen rod of an old-fashioned dame's school in the kingdom of Brobdingnag. A distinguishing feature of this species is the shortness of the internodes at the base of the stem. The leaves vary much in size, some being about 4 inches long by half an inch wide, others from 6 inches to 7 inches long by 1 inch or even more broad. The petiole is well defined, the insertion of the young leaves very hairy. One edge of the leaf is conspicuously serrated, the other very slightly, the teeth on this edge being placed irregularly and at great distances apart. Both surfaces are glabrous. At Shrubland, in Lord de Saumarez's garden, *Phyllostachys aurea* is 14 feet 6 inches high, the canes being $2\frac{3}{4}$ inches round. In the year 1893 a Bamboo was received here and Kew from Japan under the name of *Bambusa sterilis*, which the Japanese Gardeners' Association describe as closely allied to *Phyllostachys heterocycla*. This appeared to me to be undistinguishable from *Bambusa aurea*, and Messrs. Watson and Bean now share my opinion. Curiously enough, the plants were covered with an undeveloped inflorescence, which proved to be infested with a hitherto undescribed ergot.

I may here note the great confusion which has prevailed in the descriptions of several of the *Phyllostachys* tribe. *Aurea*, *mitis*, *Quiloi*, *Henonis*, *viridi-glaucescens*, *flexuosa* have all been jumbled up in the most hopeless tangle. This has been due partly to the fact of plants being sent out by dealers under any and every name, partly to the eagerness of collectors to describe plants before time had enabled them to develop their characteristics. *Phyllostachys aurea* may always be recognised by the peculiar

swelling under each node, a feature which no other Bamboo in our collections possesses.

**P. MITIS*.—This is the tallest, and in that respect the noblest, of all the Bamboos capable of being cultivated in this country. Unfortunately, it suffers terribly in hard winters, and is only to be recommended for exceptionally favoured situations. At Shrubland the culms of plants imported seven years ago are 19 feet 5 inches high and $4\frac{1}{2}$ inches in circumference. In China and Japan it grows to 60 feet high. The stems, some of which spring out of the ground like spears, are, when fully developed, beautifully arched, and have for that reason a grace which is not to be found in *P. aurea*. The young shoots when they first appear above ground seem to hang fire for a while before taking their upward growth. When once they start they are very rapid, growing in this country as much as 6 inches in the twenty-four hours. The utmost growth that I have noticed is $4\frac{1}{2}$ inches in the twenty-four hours, but mine are young plants. Messrs. Rivière have made most interesting experiments on the growth of Bamboos, of which they give tables. The maximum growth of an adult plant of *Phyllostachys mitis* during twenty-four hours in Algiers was 20 inches. They note that *P. mitis* grows most during the night, whereas the other plants of similar growth, such as *viridi-glaucescens*, *aurea*, *nigra*, &c., make their chief growth during the day. *Bambusa Tulda*, in Bengal, is said to grow as much as three centimetres (upwards of $1\frac{1}{2}$ inches) in an hour. As in *P. aurea*, the leaves, which vary much in size, are serrated on one edge, the teeth being almost if not quite absent on the other. The petiole is shorter than in *aurea*, and the hairy growth at its insertion less conspicuous. The sheaths differ much in colour, but are generally brownish and spotted with purple. As the branches are developed the withered sheaths drop off, leaving a shining deep green stem, which gradually ripens into a bright yellow. The branching begins at the base, and as soon as it is thoroughly active the growth of the culm ceases. The underground procession of the rhizome is much more marked than in *P. aurea*, the stems appearing alternately along its course. Although its running powers are in this climate not great, still in *P. mitis* the rhizomatous character is well maintained. The young shoots of this Bamboo are eaten in China and Japan. Some gastronomers profess to detect in them the taste of Asparagus; this, I confess, demands some faith. The consistency is crisp and pleasant, like Celery, but the flavour depends upon the sauce—at least that is my experience. As pickles and sweetmeats they are but poor eating. To its culinary merits, such as they are, the plant owes the synonym *edulis*, which is at any rate less foolish than *mitis*.

**P. SULPHUREA*.—A handsome golden-stemmed Bamboo, which in appearance has great affinity with *P. mitis*, though Messrs. Rivière see a connection between it and *P. flexuosa*. It is far stiffer and not so free a runner as *flexuosa*, while the only difference which I can detect between it and *mitis* is that it is not so tall and has a more brilliantly coloured stem. The other characteristics are the same; indeed, it would puzzle an expert to tell them apart. Messrs. Watson and Bean lean to this opinion. It is perfectly hardy and well worth cultivating, but difficult to obtain. At Shrubland it is growing to a height of 13 feet, with a circumference of $2\frac{3}{4}$ inches round the stem.

**P. QUILLOI*.—A very distinct Bamboo, introduced from the north of Japan by the French Admiral Du Quilio in 1866. This species has a loose habit of growth. The branches are long in proportion to the culm, the leaves are large, serrated on both edges, and often marked with purple spots on a deeper green ground than is found in the foliage of any of the other *Phyllostachys*, except *Marliacea* and *Castillonis*; the hairs at the insertion of the leaves are deep purple. The sheaths are most peculiar; they are of a pinkish brown colour, deeply mottled with purple spots, and, as they fall, reveal a brilliantly

polished dark green stem. The culms are more upright than those of *P. viridi-glaucescens*, less compact and more arching than those of *P. mitis* and *P. aurea*; the root-stock is far more active than in either of the two latter species (in this country), while it does not seem to run so much as that of *P. viridi-glaucescens*. I cannot help suspecting that those who have described the plant hitherto have not had the true species before them. I know that this is the case in one instance, where *P. Quiloi* was actually described from a plant of *P. mitis*. Altogether a notable Bamboo, growing at Shrubland to a height of 18 feet 6 inches, the canes having a circumference of $3\frac{3}{4}$ inches. Syn., *Phyllostachys Mazeli*.

**P. VIRIDI-GLAUCESCENS*.—A most elegant and graceful Bamboo, to which many cultivators give the palm of loveliness. It grows to a great height—nearly 18 feet at Shrubland, 14 feet at Kew—while the slender, tapering culms are not more than 2 inches round. The root-stock is very active, the plant being a great runner, while many of the culms come almost horizontally out of the ground, giving the plant a very widespread. The leaves are generally about 3 inches or 4 inches long and about three-quarters of an inch across; one edge is serrated, the other only partially so towards the point of the leaf. The petiole is well defined, and short brown hairs encircle the insertion of the leaf. The leaves are of a bright green, in pretty contrast with violet stems, which turn to a yellowish green. The stem is much zigzagged. Once established, this is a perfectly hardy Bamboo, but it is not safe to plant out specimens which have travelled. I have lost a large percentage in this way. It is better to pot newly-arrived plants and let them remain in a cool house until they have recovered from the effects of their journey.

**P. FLEXUOSA*.—Sometimes considered to be identical with *P. viridi-glaucescens*. On the other hand, Messrs. Rivière, who recognise the similarity, say, "We have not remarked in the spathiform sheaths of this Bamboo the toothed membranous expansions which we have met with in many other species of the same group, notably in *P. viridi-glaucescens*." There is, moreover, the fact that *P. flexuosa* flowered and fruited all over France and in Algiers in 1876, while *P. viridi-glaucescens* did not, and this would seem to indicate a different plant. It is certainly not easy to detect any outward and visible sign of difference between the two. *P. flexuosa*, which must not be confounded with the prickly species described under that name by Munro, was introduced into France from the north of China in 1864.

**P. VIOLESCENS*.—This is sometimes said to be a variety of *P. viridi-glaucescens*, but quite different both in appearance and behaviour. It is somewhat more tender, the leaves being apt to be cut by frost, which gives the plant an ugly appearance in winter, but with the spring the culms are clothed with new foliage, and after all it is only those shoots which come into existence in the late autumn which suffer. The foliage is rather darker and larger than in *P. viridi-glaucescens* and the plant more straggling, the rhizomes running rampantly. But the most distinctive feature is the deep purple colour of the young stems during their first year. This is lost in the two-year-old stems, which change to a greenish yellow or brown. The plants at Shrubland are 15 feet high, and the culms $2\frac{1}{2}$ inches in circumference.

**P. HENONIS*.—To my taste this is one of the loveliest of all our Bamboos; indeed, it would need the inspiration of a poet to do justice to its beauty. Nor is that its only merit, for it is perfectly hardy, and bears up bravely against our rudest and coldest weather. Of all the plants that I imported not one has gone amiss, though they were subjected to hardships to which, now that I know better how to manage, I should not dream of exposing them, and which proved fatal to a good many of their travelling companions. The Shrubland plants are now 14 feet high, the stems $1\frac{1}{2}$ inches in circumference. The tapering leaves are about 4 inches long and about half an inch across. They are very smooth on the upper

surface and ribbed on the lower, serrated on one edge and very slightly on the other. The colour is a pale green, and less glaucous on the lower surface than most of the leaves of the *Phyllostachys*, the midrib prominent, the petiole well defined. The slender tall stems are green at first, growing yellower with age, slightly zigzagged. The root-stock runs rather freely. But it is to its habit that this Bamboo owes its surpassing loveliness. The two-year-old culms, borne down by the weight of their own foliage, bend almost to the earth in graceful curves, forming a groundwork of the most elegant beauty, from which the stems of the year spring up, arching and waving their feathery fronds, the delicate green leaves seeming to float in the air. I regard *P. Henonis* as the embodiment of every grace to which plant life is heir. The Japanese synonym is *Ha-chiku*, the Chinese characters with which it is written signifying the "light or volatile Bamboo."

**P. NIGRA*.—This is perhaps the best known, and from its black stems the most easily recognised of the hardy Bamboos. On the Riviera and in Algiers it grows to a height of about 30 feet, the stems being nearly 6 inches round. At Shrubland and at Kew it is 10 feet high and the stems are 2 inches round. At Leonardslee it is 20 feet high. With me the plant has been a little capricious and difficult to establish, but once it has taken hold of the ground no Bamboo seems hardier. The stems are of an olive-green colour during their first year of growth, changing to shining black the following year. They are slightly zigzagged. The leaves, which are from 3 inches to $4\frac{1}{2}$ inches long by three-quarters of an inch broad, are green on the upper surface and glaucous underneath. The rhizome runs with some freedom. Messrs. Rivière call attention to some peculiarities in the structure of this Bamboo upon which, as they are more interesting to the botanist than to the gardener, it is unnecessary to dwell here. It is enough to say that in *Phyllostachys nigra* we have a plant of striking beauty and undoubted hardiness. It is the rhizome of *P. nigra* which furnishes the Wanghai cane of commerce.

**P. NIGRO-PUNCTATA*.—It is doubtful whether this species can be separated from *P. nigra*. The only difference is in the colour of the stems, which are speckled instead of being pure black.

**P. BORYANA*.—One of the handsomest and most vigorous of the hardy Bamboos, very graceful in its habit, as indeed are both *P. nigra* and *P. nigro-punctata*, of which some authorities consider it to be a variety. As in their case, the stems are green during their first year, but change colour the second year to a dull brown splashed with large deep purple or black blotches.

**P. FULVA*.—A newly-imported Bamboo from Japan. Perfectly hardy and promising to be a valuable decorative plant.

**P. CASTILLONIS*.—A most lovely plant—indeed, one of the best of the many good gifts which we owe to Japanese gardens. The foliage is larger than it is in most of the Bamboos, some of the leaves being as much as between 8 inches and 9 inches long by nearly 2 inches broad. When they first appear they are striped with bright orange-yellow, which in time fades to a creamy white. Both edges are serrated. The petiole is short, the leaf-sheath dressed with a frill of long brownish purple hairs. The stem, which is much zigzagged, is bright yellow and green, the latter colour remaining in the deep channels left by the pressure of the branches, so that the two colours are alternate all the way up the culm, the hues being intensified with age. As the sheaths of the branchlets are of a very pretty pink, the plant has a tricoloured effect which is most pleasing; the branches come in twos and threes. I understand that at Castlewellan this species has attained a height of 20 feet, with a proportionate circumference of the stem. Twenty-four degrees of frost in January, 1894, did them no harm, but M. Marliac tells me that the foliage is apt to suffer from snow. This, however, can at the worst be only a temporary evil. One of my plants is

extremely curious as a variation from the type. Not only is the variegation absent from the leaves, which are bright green, but in the stems its position is exactly reversed, the channels being yellow and the rest of the culms green. The Japanese name is Kimmei-chiku (the Golden Brilliant Bamboo).

**P. RUSCIFOLIA* (*P. kumasasa*—*P. viminalis*, Marliac).—A pretty little Bamboo, described by Munro as *P. kumasasa*, though the Japanese name is *bungozasa*. The stems are about 18 inches high, purplish green in colour, with brown sheaths, much zigzagged and very slender, distinctly channelled from the pressure of the branches, which spring in twos and threes, sometimes in fours, from the nodes. The leaves are from 2 inches to 4 inches in length, and an inch, more or less, in width; ovate; soft hairs very conspicuous on the lower surface, but none on the upper surface or on the insertion of the leaves, which are serrated on both edges.

BAMBOOS OF DOUBTFUL ORIGIN.

BAMBUSA DISTICHA (*B. nana*, Hort.).—A pretty little dwarf Bamboo, sent out as *Bambusa nana* by gardeners. The name *nana* belonging already to a Bamboo described by Roxburgh, its repetition was confusing. Stem about 2 feet high, round, very slightly zigzagged; branches and leaves distichous; leaves hairy, especially at the base, and serrated at the edges, about 1½ inches long by three-quarters of an inch broad, tapering to a point; leaf-sheaths hairy; rhizome inclined to run, but far less so than in *Bambusa pygmaea*. A very distinct little plant, most useful for a choice corner in a rock garden. The origin of this Bamboo is doubtful. Mr. Watson says, "It is more like *Chusquea tessellata* (Munro, New Grenada) of any of the specimens in the herbarium."

ARUNDINARIA ANCEPS.—A very beautiful Bamboo discovered by Mr. Jordan, superintendent of Regent's Park, in the stock of a dead nursery gardener, whose books being destroyed or lost, it was impossible to trace its origin. It is probably a Chinese species. In general habit very like *A. nitida*, but absolutely distinct; the culms are brown when ripe instead of purple-black; the leaf-sheaths are hairy instead of being absolutely without hairs, and the petiole of the leaf is yellow, whereas in *A. nitida* it is purple.

A. NOBILIS.—A grand *Arundinaria*, probably of Chinese origin, growing to a height of 24 feet at Menabilly, in Cornwall. Loses its leaves in winter, and in very severe seasons the culms die down, reappearing the following summer. In Cornwall it is quite hardy, only losing its leaves in early summer when the new ones are ready to appear. The tall stems are yellowish in colour with very dark purplish nodes, of which the lower rim is broadly marked with grey; much branched. The lanceolate leaves are thin and bright green, with a purple petiole, the colour of which is continued along the edges, fading away to the point. There are no cross veinlets, the leaves being striate.

A. B. FREEMAN-MITFORD.

MOSS LITTER.

TO THE EDITOR OF THE GARDEN.

SIR,—I am not fond of splitting straws, or disentangling Moss litter for the matter of that, but I cannot help noticing in a recent issue of THE GARDEN that your correspondent "H. H." writes: "Mr. Shaw says that the value of the peat-moss for the ground before it has been used as a manure (*sic*) is as great as that of straw." If "H. H." will kindly re-peruse my letter he will find that I make no assertion of the sort, but that I simply ask a question: "What would be the manurial properties of unsoiled straw?" I am no chemist and quite ignorant on the subject; therefore I ask for information, having no desire to try the experiment myself. I do not admit, neither have I ever admitted, that the peat-moss remains as

an absorbent. Such an admission would be in direct opposition to my experience. If properly made it disappears and becomes an integral part of the soil, but I did write that occasionally a large lump may be found, and I added that there ought to be no large lumps. However, all the contentions anent the possible damage which might result from these undigested lumps are wiped clean off the slate by the excellent letter from your correspondent "Cor," describing the cultivation and products of the peat-moss bogs near Preston, and it is useless to discuss them further. I can only regret the contrast between "H. H.'s" short letter and my long one. I have no doubt we both write in accordance with our experience and our lights, but I must say that adding lime to good manure surcharged with ammonia seems to me very like throwing away a good ham and drinking the water it has been boiled in. Judging by the farm waggons and carts which pass my gates loaded with moss-litter manure, I fancy that the farmers in the neighbourhood not only use it, but pay for it, and I do not

celerates the process like the addition of putrescent animal matter, which acts as a ferment and greatly hastens the decomposition. The soils for which peat forms the best manure are the chalky and clayey. Sand has too little tenacity; it lets the gases produced by the decomposition escape instead of attracting them, as clay and chalk do, and thus preventing their escape. J. WHITWORTH SHAW.

Lingfield, Surrey.

GARDEN FLORA.

PLATE 1251.

TULIPA SPRENGERI.

(WITH A COLOURED PLATE.*)

IN the earlier stages of its growth no other Tulip is so distinct in its general appearance as the one figured in the coloured plate to-day. It will, from its absolutely distinct habit, puzzle the keenest Tulip connoisseur, who will refer the plant when not in flower to any genus but to the one to which it really belongs.



Bamboos at Kew (*Phyllostachys viridi-glaucescens*).

know what they could do with it except plough it into the land or spread it on their pastures. The following extract from an article on "Peat" in the "National Encyclopædia" may possibly interest your readers:—

Peat contains all the elements of the richest manure, and may by an easy process be converted into humus; for this purpose the agency of alkalis is the most effectual. If the tannin be decomposed, decomposition of the vegetable fibre will go on and soluble humus will be formed. When newly dug up, if caustic lime be added to it before it is dry the moisture of the peat slakes the lime, which acts on the gallic acid in the peat and neutralises it. If the mixture be then excited to fermentation by the addition of animal matter, such as urine or manure, oxygen is absorbed and carbonic acid evolved, and the residue converted into an excellent manure containing much soluble humus. The same may be effected more slowly by mixing peat with clay or marl and allowing the mixture to remain exposed to the atmosphere for a considerable time, frequently turning it. But nothing ac-

Its introduction into Europe dates from about 1894, when Mr. Baker named it and described it. The Messrs. Van Tubergen, of Haarlem, Holland, have for many years received it from their Armenian collector, who first sent it to them from the hills in the neighbourhood of Merzifun. The crimson and black Tulipa armena and a fine new golden Tulip with green basal blotches, *T. galatica*, usually come with it; in fact, it always seems to grow in company of these, as collected bulbs of either of the latter named species invariably contain a larger or smaller percentage of *T. Sprengeri*. Botanically it comes nearest to the European *T. Haageri*, but as a garden plant it is totally distinct. The bulb of this Tulip is not large, egg-shaped, and surrounded by a very hard, brown-black skin, in this respect somewhat resembling *T. Clusiana*. The leaves are narrow,

* Drawn for THE GARDEN by H. G. Moon from flowers sent by Messrs. Van Tubergen, Haarlem. Lithographed and printed by J. L. Goffart.



TULIPA RIPOSTATA

of a very pale green, and arranged as in a tuft. They are produced very late in the season, which is a decided advantage in a cold climate. The flower-stems are each about $1\frac{1}{2}$ feet in height, supporting a very elegantly formed pointed flower of a uniform glowing vermilion-scarlet, without any other shade of colour. Only the three outer segments of the flowers are tinted at the outside with a sort of dove-grey; this, however, is not perceptible when the flower is fully open. The conspicuous anthers are bright sulphur-yellow. Its time of flowering—the middle to the end of June—is also quite exceptional, all other Tulips being

many to whom this flower is dear. Like many other Eastern Tulip species, its propagation from offsets is extremely slow, but as it flowers at a propitious time it can set and ripen its seeds to perfection.

JOHN HOOG.

Haarlem, Holland.

THE WEEK'S WORK.

FRUITS OUTDOOR.

PRUNING.—Having finished those trees on walls which should be pruned before winter, we go on next to trees in the open, such as cordons, espa-

frequently happens that as the side spurs grow the trees become too thick; consequently the question arises as to whether we should permit this and put up with a good deal of inferior fruit, or cut away sufficient of these leading growths to admit sufficient light and air to those remaining. I prefer the latter course, and never let a season pass without having a good look over all the trees, thinning all those that need it. No doubt fairly thick trees, if well balanced, look better during the winter and after they are pruned than do others which have been kept much thinner; but it is not to this that one has to look if good fruits are desired, for the thinly trained trees are the ones which give the best results as far as quality, which should be the main object in growing garden fruits, is concerned. Old trained Pear trees in the open, like those on the walls, are very much given to producing long and ugly spurs on which the fruiting or flowering buds become altogether too numerous and congested, and these may well be dealt with as recommended earlier for those on wall trees; indeed, the keeping of such spurs well in hand is one of the most important factors in Pear culture after the trees have reached a free fruiting age. To young trees of Apples, Pears, Plums, &c., which have not yet arrived at full size a different system from that in vogue generally should be applied. It is nothing short of ridiculous to cut away from these year after year all but a few inches of the new growth made, yet how often do we see this done without any discrimination. Of course, it is necessary in building up an espalier, for instance, to shorten the lead down to a point from which it is intended the next pair of branches shall spring, leaving one bud above this point for the next year's lead. This is obvious; and again sometimes it is necessary to shorten a branch here and there rather closely for the sake of balance, but when it comes to the leading branches already formed or the leading shoots of cordons there is no sense in cutting away ripened growth, for we only retard the formation of the tree and also its fruiting. The only excuse for hard pruning is to give strength, but well-planted and well-treated trees generally grow quite strongly enough, and for a weak shoot here and there some support can be provided until the natural strength comes. For summer pruning the secateur is a very handy tool, and no permanent harm is done by the squashing which this instrument gives to the shoot, but in winter the case is different, and I would not have such a tool in use, for the bruised surface left never heals over properly. For big branches the saw is the best implement, trimming the surfaces, and especially the bark, with a sharp knife later on. In the hands of a handy man a good chisel is useful, too, for removing growths too big for the knife, but for anything smaller there is nothing to be compared to a good sharp knife in the hands of a person competent to use it. I say this advisedly, for there is much so-called pruning done by incompetent persons. One of the chief faults of these is that they take no notice where they make their cuts or in what direction they run; consequently, trees under such pruning soon bristle with dead snags that in very many instances are the forerunners of dying branches. The only proper way to shorten a young growth is to cut it back quite close to a bud, and the cut should slope in the same direction that the bud is pointing, as such cut surfaces will soon callus over and disappear; whereas, any wood left beyond a bud will certainly die back to the bud. Again, in shortening a big branch it should be cut back to the junction with another branch or else cut out entirely, and in either case the cut should be made neatly close at home. Another thing to remember is that one should not shorten shoots indiscriminately to so many inches long, but each must be dealt with individually, so that each bud selected as the terminal one should point in the direction in which the branch should grow. This will be generally outwards, and trees so pruned will not only be done properly, but they will look much better,



Arundinaria japonica (Bambusa Metake) at Castlewellan.

long past when this one comes into bloom; in fact, in Messrs. Van Tubergen's nursery it usually flowers when most of the ordinary single and double Tulips have been lifted. A group of it in flower is one glowing solid block of colour and very beautiful. Although, happily, we have quite enough other flowers in the month of June that we need not particularly care for a display of Tulips at that season of the year, still the very fact that a Tulip has been introduced into cultivation which prolongs the Tulip season for over a month will secure it a place in the gardens of

liers, pyramids, and all so-called trained trees. These are generally planted near the principal walks where tidiness is an object, so the sooner the work is pushed forward the better it will be. All those trees which have filled their allotted space must be pruned on the same principle, that is, the growth must be restricted; in fact, almost every bit of wood growth which has been made during the past year must be cut away. Now and then main branches of pyramids are allowed to divide themselves into two or more leads while they are young and before they are clothed with fruiting spurs. This is all right when these new leads have plenty of room for development, but it

as most of the cuts will be concealed. One more item—not, perhaps, of so much importance, but which reveals the good workman—consists in making the cuts short, *i.e.*, as nearly straight across the shoot or branch as is consistent with the free working of the knife.

BUSH FRUITS.—The actual time when these are pruned does not make much material difference, provided the weather is mild when it is being done, and one likes to do them in good time, so that the prunings may be gathered up out of the way of the mulching material, which will be wheeled among the bushes during frosty weather. So long as the main branches are thin enough it matters little what form the bushes take, but the usual basin shape is as good as any for Red and White Currants, while Gooseberries appear to be best suited grown as open bushes. Black Currants may have some of the older branches removed bodily, and the young growths should be left intact; sucker-like growths springing from the base should be encouraged, and not cut away. Red and White Currants are best spurred in closely all along the main branches, leaving no young wood, except for extension. For Gooseberries I prefer a combination of old spurs and new wood, as we get fine fruits from the lengths of young wood left in, and I am inclined to think that the extra vigour the bushes get by encouraging young wood tends to lessen the danger from red spider. A word of caution may be necessary with respect to pruning Gooseberries before spring in places where bullfinches are plentiful, as the opening out of the bushes renders access easier to the birds, and early-pruned bushes must be protected in some way from their ravages. On weeping varieties like that best of all late dessert Gooseberries, Red Warrington, the shoots should be rather more severely shortened than those of stronger and upright growth. Where the Gooseberry caterpillar has been very troublesome it is wise to skin off the top 2 inches or 3 inches of soil from under the bushes after pruning is finished, taking this right away to where it may be burnt and replacing it with some fresh material. If this is inconvenient, the best remedy is to spread tan 2 inches or 3 inches thick over the plot, for the sawflies do not seem able to get through this material when hatched from the chrysalis stage, in which they winter buried in the soil under the bushes.

CORNUBIAN.

KITCHEN GARDEN.

FRENCH BEANS.—Special pains will now be imperative where anything like success is to be achieved with this vegetable. Those who took the hint I gave some time ago to lay in in dry quarters a nice quantity of light loamy compost for placing in the pots will now realise the advantage, as the seed sown in semi-dry soil stands two chances to one against seed sown in wet, sticky compost. Water in the majority of cases will not be needed until the seed germinates, when a thorough moistening must be given. Dribbles administered often are not only deceiving, but also harmful. From the present time till the middle of January, Beans forced in pots or boxes must be given as light a position as possible near the roof-glass. It is useless attempting growing them in dark or dirty structures. A steady regular heat is also especially important, as a few days suffice to draw the growth up when subjected to, say, more than from 60° to 65° by night. I do not care to use the syringe overhead during the winter months, though moisture of an atmospheric nature according to the weather is necessary both for aiding in keeping red spider and white fly at bay and for assisting growth. Care must be taken in the matter of feeding, as roots being few and of a less vigorous texture than those formed by spring-sown batches, they cannot assimilate strong doses of liquid manure. All the same, plants in fair vigour growing in open compost will be benefited by applications of farmyard liquid the colour of pale ale at every alternate watering. On no account crowd the plants, about four

plants in a 6-inch pot being as many as can be properly exposed to the action of sun and light. It is useless waiting for the late-formed pods to swell off, as they seldom do so in any quantity, so that as soon as a couple of gatherings have been made the plants had better be thrown away. Where Beans must be had, the best and, indeed, only way of making sure of a fairly constant supply of tender, normal-sized pods is by having as many batches following each other as possible, allowing only some ten days or so to elapse between the sowing. Then some sorts are certainly better suited for winter culture than others. Had I a good light house I would not scruple to sow the good old *Sion House* in addition to *Newington Wonder* and *Mohawk*. Even at this period and until the new year a chink of air should be given whenever the weather will allow of it. Do not wait for sunshine, but open the ventilators somewhat when the air is calm and mild. It is astonishing how favourably this tells. Of course, Bean forcing in midwinter is uphill work.

MINT AND TARRAGON.—The sooner roots of both these herbs are potted or boxed up the better, as then if subjected to a cool temperature they get a good foothold previous to being moved into slightly warmer quarters. Often insufficient root-room is allowed, the roots being lifted in a hurry and placed at once in too much heat, the result being not only weak, spindly produce, but a general weakening of the clamps from which they do not soon recover. Some good soil to which say a fifth part of rotten manure has been added should be provided, and later on, when growth is active, manure water given. A Peach house at rest is a good position for the pots or boxes for several weeks, Tarragon being rather excitable, and often in mild winters becoming fit for use by the new year if potted now. Relying upon Mint roots from crowded, weakly beds is most unsatisfactory. Both it and Tarragon are often treated in a slipshod sort of way, but in many establishments it is of such importance that pains taken with forced batches are well repaid.

MUSHROOM HOUSE.—Up to the present very little artificial heat has been required in the Mushroom house. So much the better, as the produce under cool conditions is always of a sturdier, better coloured and flavoured character than when the pipes have to be heated in order to maintain the orthodox night figure of 50° to 55°. When the supply is being well maintained, the lower of these is the better, as much artificial heat invariably produces a dry, harsh atmosphere, which materially affects the quality of the Mushrooms, and if continued long dries many of the tiny buttons up. Even now-a-days one sometimes finds a much too sloppy, steamy condition in Mushroom houses, this being responsible for the great proportion of what are termed black heads. Some who have sufficient heating power are not in favour of covering the beds at all, but I prefer to surface newly-spawned beds with a little dry oat straw, keeping the same from pressing on the soil by first laying a few bushy pea stick tops on the bed. Continue to prepare more fresh, sweet material for the formation of new beds, droppings from corn fed horses kept dry from the first being indispensable for the production of the finest produce. Standing a barrow in the stable-yard uncovered for the reception of the droppings is a common, but a bad practice, as they often become saturated by heavy rains, and even if afterwards dried are never so good. Avoiding fierce heating and exercising patience until a sufficient quantity has been got into a safe condition for firm ramming have more to do with the production of fine Mushrooms and plenty of them than purchasing the spawn from any particular firm. A cool place quite free from wet is the best store for the spawn, but a too warm, drying temperature should be avoided.

J. C.

Ornamental pots.—There are now great numbers of ornamental pots, jardinières, &c., intended for the reception of plants in situations

where the ordinary earthenware pot would be out of keeping with its surroundings. In most cases the pot in which the plant is growing is supposed to drop inside the more ornamental one, but the great mistake is frequently made of so contracting the mouth of this last, that only a small pot can be inserted, and the plant therefore is out of all proportion to the large globular-shaped jardinière. This need not be, as various shapes might be suggested to which this objection would not apply. A rather widely expanded, yet deep Tulip flower seems a good ornamental design for those that object to a plain shape as being too simple. At all events, the swollen body and contracted mouth which one meets with everywhere are the worst of all, and often cause the plant to be sacrificed by turning it out of the pot in which it has grown in order to drop it into its place.—H. P.

DESTROYERS.

THE CANKER FUNGUS.

(*NECTRIA DITISSIMA*.)

THE following very interesting remarks on this destructive fungus appear in a leaflet just issued by the Board of Agriculture:—

It is customary with fruit growers to style the various disorders which affect and kill branches and boughs of Apple trees canker. Injuries from frost, hail, improper and excessive pruning, and from insects, such as the woolly aphid and species of *Lachnus*, all come under this common appellation. It is the same in Germany, where these diseases are termed Krebs, and in France, where the name is Chancre; and much confusion exists generally as to the real nature of the maladies. There is no doubt that frost, hail, wrong and untimely pruning, and insects have injurious effects upon Apple trees, but they are quite distinct from those caused by the canker fungus. Injuries of this nature are also frequently described somewhat vaguely as being due to hypertrophy, or excessive sap formation, whereas hypertrophy may be said to be the effect rather than the active cause of these troubles. A not infrequent notion regarding canker is that it is due to unsuitable soil, to want of drainage, or to excess or lack of manure, or of certain manurial constituents. But cankered trees are found on all soils, drained as well as undrained, and where manure has been freely or sparingly applied. It is natural to find this, seeing that the cause of the true canker is the very dangerous fungus known as *Nectria ditissima*, which is far more destructive than frost, hail, bad pruning, unsuitable soil, or too much or too little manure. Like most other injurious fungi, it is difficult of detection, except by careful or trained observers. Upon examination of a bough or branch infected by *Nectria ditissima*, it will be seen that some of the twigs or shoots formed are dead or dying, and that there are series of wide cracks or fissures in the bark for some distance round them, and sometimes also running upwards and downwards on the boughs, which are abnormally swollen near the twigs. Places will be noticed in some cases upon infected trees where the bark is rolled back in raised and distorted forms round the affected branches, leaving the black and decaying wood exposed in the middle of the circular or oval spaces denuded of bark. Above these the branches are dead, or partly dead, or dying. Further investigation will demonstrate that there is but little living wood, and that the formation of wood has been for some long period disorganised, as shown by the irregularity of the "annual rings." The fungus on one stem, or bough, may be still living and destroying; on another stem, or bough, it may have died, but the bough, or stem, has been rendered practically useless for fruit bearing. Very large boughs are often found ruined in this way, and occasionally young trees have large canker centres in their main stems which must materially affect their powers of fruit

production and their full development. Young boughs of Apple trees often have the whole or their bark ringed by the fungus, especially near the tips, so that they die, and in this case it is generally held that frost has caused their death. It will be found that the fungus, as a rule, is located near and round the shoots or twigs, because the cuticle there is tender and to some degree extravasated and liable to receive injuries from frost or hail, making it a convenient home for the spores of the fungus, which commences life as a saprophyte—i.e., a feeder on decayed substances. The canker fungus attacks some varieties of Apple trees more than others. Those which yield the best eating Apples are most liable to it. Cox's Orange Pippin is a variety subject to this disorder, as is also the Ribston Pippin, while the Golden Pippin and several of the Rennets, or Reinettes, notably Reinette des Carmes, are somewhat liable to canker. Trees with the thinnest and smoothest bark are most liable. In France, trees bearing cider fruit are not usually cankered as much as those producing fruit for the table. Varieties of the Reinette type are specially attacked as well as some of the Calville tribe; and in Germany, according to Goethe, Reinettes, especially the Reinette de Canada, are most frequently infected. Goethe states that the canker fungus is very common in Alsace and in the Rhine districts of Prussia, where thousands of trees succumb every year to its attack. He adds that there are certain regions where the Apple trees most liable to infection cannot be cultivated.

Pear trees are affected by *Nectria ditissima* in the same way as Apple trees. Fortunately in this country the attack on Pear trees is not so frequent as on Apple trees, though in France it appears to affect both pretty equally. The effect of the fungus and its methods of attack are precisely the same as upon Apple trees. Plum trees are also infested by this fungus. This fungus is also destructive to Oak, Beech, Ash, Hazel, Alder, Maple and Lime trees.

DESCRIPTION AND LIFE HISTORY.

The perithecia, or spore bearing cases, of the fungus appear first as minute red dots. From the spores emanating from these a mycelium is produced, which penetrates the rind and wood, whose juicy tissues are dried up and destroyed. The action of the mycelium in course of time, though it moves slowly, causes distortions and malformations of the surrounding parts, and death to all the branch above the centre of its action. Perithecia, or spore-bearing cases, are formed on the surface of the rind after a time. They are crimson, and are found in small groups; they are clearly visible to the naked eye, and are slightly flask-shaped. Within these are cylindrically-formed asci containing eight spores, each having two colourless cells. They germinate in water quickly, and placed upon trees infect them with canker. Hartig and Goethe have infected forest trees by placing spores of *Nectria ditissima* upon their living parts. They have also infected trees by placing *Nectria* spores upon parts injured by hail, or with decayed matter on them, and show that *Nectria ditissima* is both saprophytic and parasitic. This has also been proved by De Bary. In addition to the perithecia emanating from the mycelium of *Nectria ditissima* there is, at all events when it is actively parasitic, a formation of conidia evolved from a stroma of cushion shape. This takes place before the development of the perithecia, which contain the spore-bearing asci. These conidia have also been made by Hartig and Goethe to infect forest trees, and to germinate freely upon decayed and living tissues.

METHODS OF PREVENTION AND REMEDIES.

One obvious way of preventing the spread of canker is to be careful not to make use of grafts from infected trees, or grafts showing any trace of the fungus. Young trees should be examined closely for any signs of canker. Any wounds caused by hail, pruning, or other causes upon them should be viewed with a strong pocket lens to discover the red

perithecia of the fungus. Infected parts should be cut out with a sharp knife and tar applied, and, where possible, infected branches should be cut away, and, together with all the pieces cut out, burnt to prevent the spread of the fungus. It would be desirable to note the trees that canker most readily, and to avoid planting these varieties. If a tree is badly cankered in an orchard or near other trees it would be expedient to cut it down and burn it. A strong solution made with 20 lbs. of sulphate of copper to 100 gallons of water applied in the late autumn or winter would undoubtedly check the fungus and destroy it in its conidia and spore stages. This could be applied with a knapsack machine where the trees are small, and upon large trees with the help of a ladder where the disease has affected only a few branches. The spray should be directed for some time on the infected spots, and it would be necessary to spray them two or three times during the winter. When trees are badly infected they must be sprayed all over by means of a garden engine with strong pumps and long hose, like the engine used for hop washing. Sulphate of iron, dissolved in warm water, would be of value if applied in the autumn and winter at the rate of 1 lb. to every gallon of water. It would at the same time remove lichenous and mossy growths which harbour fungi and insects, and injuriously affect the trees. Apple trees should be kept free from the common Apple aphid and the woolly aphid, as these convey fungus spores from tree to tree. In woods and plantations the diseased branches should be removed from infected trees and burnt. Foresters should examine trees that show signs of decay with a pocket lens to ascertain if the *Nectria ditissima* is the cause of the evil.

DISEASES MISTAKEN FOR CANKER.

There is more than one disorder of Apple trees wrongly designated as "canker," and injuries from hail, frost, and other climatic causes are often generalised under this term. The action of true canker is, as common observation indicates, comparatively slow. Hartig states in his "Baumkrankheiten" that it does not usually extend more than half an inch in a year; while in other attacks attributed to canker the disorder usually spreads with far greater rapidity and trees are quickly destroyed. One form of affection of this nature is undoubtedly due to bacterial agency and to the bacillus defined by Professor Burrill in the "American Naturalist" as *Micrococcus (Bacillus) amylovorus*. This microbe is most disastrous in its effects upon Apple and Pear trees in the United States, and spreads with great rapidity. Pear trees, perhaps, are more liable to this infection than Apple trees in the United States, but the liability of the two kinds of trees varies in different States. It attacks chiefly the inner bark and cambium of the body of the tree, as well as its most important branches. Unlike the fungus *Nectria ditissima*, producing the ordinary canker, which establishes itself only in already existing wounds, scars, and cracks upon the bark of trees made by pruning, hail, insects, or by other fungi, the *Bacillus amylovorus* descends with the sap in the living bark, through the twigs and branches, to the body of the tree. Trees infected by this microbe are found to be perfectly healthy at their roots and up to the part where the blight has reached, showing that infection comes from the upper part of the tree. It sometimes commences its attack in the blossom or on the tips of the shoots at the ends of the branches. In the spring it is said to be always first noticed on the blossoms, which turn black as if injured by frost. The microbes stand cold well, and it has been found that the bark of infected trees contains living colonies for a longer period in the winter than in the summer. In spring-time, when the trees are full of sap, the microbes invade new bark and spread rapidly. At this period of the year, too, a viscous, sweetish, brownish yellow substance exuded from parts of the stem and branches attracts bees and other insects, which convey the microbes to the blossoms, and thus disseminate the infection extensively. In this country Apple and Pear trees are often seen with the blossoms blackened as if by frost, with the tips of their branches withered or dying, with deep wounds in the bark, and with their skin peeling and cracking in all directions. Frequently no trace of *Nectria ditissima* can be found in these cases, and the appearances correspond generally with those occasioned by the *Bacillus amylovorus* in America. The treatment which has been found successful in arresting this disease in transatlantic orchards may prove equally successful in this country. It is simple, consisting merely in cutting out and burning every particle of infected wood before the sap begins to rise. The infected centres may, however, be cut away at all times of the year. American experts advise that a careful inspection should be made of all Apple and Pear trees two or three times during the summer. It takes two or three years for the disease to become a serious epidemic; but the early removal of the first cases will prevent this development, and will, at the same time, save much labour later as well as many valuable trees.

FLOWER GROWING IN THE SCILLY ISLES.*

As the Scilly Isles are the main source of the flower supplies in our markets at the beginning of the year, they may appropriately be noticed first among the flower-producing districts of the country. The soil is nearly all of granitic origin, and, for the most part, the cultivated top soil is a sandy loam, mixed with clay in some places and with peat in others, but nowhere heavy. There are large tracts of almost pure sand, but nearly all that is cultivated is admirably suited to the growth of bulbous flowers and market-garden vegetables. Encircled as the islands are by the Gulf Stream, their climate is remarkably mild and equable, protection to tender crops even in winter being needed only against the frequent gales of wind to which they are subject. Frost rarely occurs, while snow seldom falls, and hardly ever lies on the ground more than twenty-four hours when it comes. The rainfall is moderate. Seeing that the prosperity of the islands is mainly dependent upon climate, as will be shown hereafter, a tabular extract from "The Climate of the Isles of Scilly," by Dr. Macklin, of St. Mary's, Scilly, will not be out of place. The averages of rainfall for the several months are those of twenty-five years, and the averages of temperature cover twenty years, all being based upon Dr. Macklin's observations. The islanders would be glad of more rain than they get in the spring and summer. The mean daily range of temperature in twenty years is given by Dr. Macklin at 6.8°. October has the lowest range, or 5.9°; April the highest, or 8°. The mean maximum range was 11.5°, November being lowest with 2°, and April highest with 15°. The mean range for the whole year during the twenty years was 15.1°—i.e., the difference between the mean temperatures of the warmest and the coldest month. Taking the six winter months alone, the mean range was only 3.7°. For the six summer months the mean temperature was 57°, and for the six winter months 47°, showing a difference of only 10°. These figures indicate not only a mild, but also a remarkably equable climate. Dr. Macklin further states that the mean temperature of the Scilly Isles is one degree warmer than that of either the west of Cornwall or the Channel Islands. When the late Mr. Augustus Smith, in 1834, became, mainly from humanitarian motives,

* Extract from a paper on "Flower and Fruit Farming in England." By Mr. William E. Bear, in the Journal of the Agricultural Society of England.

Lord Proprietor of the islands (a title given to the lessees holding under the Duchy of Cornwall), they were over-populated, and the people, who partly lived by smuggling, were in a distressed condition. The sub-division of holdings had been carried on to a disastrous extent, and very many of them consisted of scattered plots of land. Mr. Augustus Smith set himself to the reform of the abuses which he found prevalent. He stopped smuggling, made education compulsory, enlarged and consolidated the small holdings, and allowed only one child in a family to succeed to his father's farm, practically forcing the rest of the youths to migrate to the mainland, to emigrate to the colonies, or to go to sea. Never was a benevolent despotism better justified by results, though it was some years before the islanders became generally prosperous. Steadily, however, Mr. Smith, who spent all the rental of the islands for many years in improvements, educated the people in habits of industry and ultimately of enterprise, until, from being among the poorest small farmers in the United Kingdom, they became the most generally prosperous. The extent to which the sub-division of holdings had been carried before Mr. Augustus Smith's time may be imagined when it is mentioned that, long after the con-

Mr. Smith's rule began, and at any rate he made it successful for some years. The ordinary farming of the period, chiefly consisting in the growth of small areas of corn and a few Potatoes, and the keeping of stock on the grass land, was not very profitable; and the first extensively advantageous change which the Lord Proprietor induced the farmers to make was gradually to convert their farms into market gardens, for the production of early Potatoes, Asparagus, Seakale, and other crops. The earliness of these products rendered them exceptionally profitable, and for many years the Scillonians were prosperous market gardeners of the old kind, as producers of culinary vegetables. A still more advantageous change, however, was yet to come. In 1870, or a year earlier or later (strangely enough the date of the important event has not been precisely recorded), the father of Mr. Allen, the present steward, packed for the late Mr. Augustus Smith, then Lord Proprietor, a box of Narcissi, and sent it to Covent Garden, receiving £1 in return. When this became known, a few of the farmers began quietly to collect bulbs wherever they could find them growing in the fields or hedgerows, and to cultivate them so as to increase stocks, getting a few flowers for

production was small. In 1883 Mr. Dorrien-Smith went to Belgium, Holland, and the Channel Islands to obtain information as to the cultivation of the Narcissus. In the Channel Islands he found the people devoted chiefly to the production of Grapes, Potatoes, and other vegetables, and growing very few flowers; while in Belgium and Holland Narcissi were a month later in flowering than in Scilly. Hence he concluded that it would be safe to extend the cultivation of these flowers, and he bought bulbs extensively for himself and his tenants. From that time the cultivation of the Narcissus rapidly extended and many new varieties were introduced, very high prices being paid for some of them. In 1885 the Bulb and Flower Association was founded by Mr. Dorrien-Smith, to promote the growth of the flowers by holding annual shows and otherwise. By that time the exports of flowers from the Scilly Isles had become considerable, amounting to 65 tons in the year, and the quantity increased to 85 tons in 1886, to 100 tons in 1887, to 188 tons in 1888, and to 198 tons in 1889. Exports steadily increased up to 1893, when they reached 448 tons, after which there was a falling-off, due to variation in the crops; but the



Bamboos (Dorset coast).

solidation had been in progress—namely, in 1870—the sizes of farms in St. Mary's were reported by Messrs. Scott and Rivington to range from five to fifteen acres, with the exception of one of thirty acres, which included a large proportion of untilled land. On the other islands, the same writers stated, the farms were still smaller, many covering only three acres, while the largest farm on St. Agnes was twelve acres in extent. At the present time the smallest farm in St. Mary's is ten acres, and the largest is eighty acres, exclusive of some rough grazing land; while the extreme areas are about five to twenty acres in St. Martin's, five to twelve acres in Bryher, and four to fifteen acres in St. Agnes, not counting the downs, which the tenants on these last three islands have in common. Bearing in mind the greatly increased returns of the land since 1870, the enlargement of the holdings is significant. Before Mr. Smith's time kelp-making had been one of the most remunerative industries of the islands, and when it ceased to pay, a fishery company was formed, but soon became moribund, though the industry has since been restored to some extent. Shipbuilding was started, either shortly before or shortly after

market in the meantime. The varieties growing in the islands at the time, as stated by Mr. T. A. Dorrien-Smith, the present Lord Proprietor, in a paper read before the Royal Horticultural Society in 1890, were the old double Daffodil (*Telamonius plenus*), Campernelli, Scilly White, Grand Soleil d'Or, two varieties of Grand Monarque, Biflorus, *Poeticus recurvus*, and *Poeticus flore-pleno*. How the bulbs were introduced is not certainly known, except that Campernelli was raised from two bulbs presented to Mrs. Gluyas, the wife of a Scilly resident, nearly sixty years ago by the captain of a French vessel. Mr. Dorrien-Smith is of opinion that the rest were introduced by the governors, as the greatest numbers were found around their former country seat in St. Mary's, or they may have been brought to Tresco first by the monks who once resided there. In 1875, when Mr. Dorrien-Smith took up his residence in Tresco, the demand for flowers was still small, and prices were not tempting enough to induce the Scillonians to grow them upon a large scale. It was not until 1880, about ten years after the few pioneers commenced operations, that the industry became thoroughly remunerative, and even then the

climax was reached in 1896, when 514 tons were exported. It is worth while to pause for a moment to consider what 514 tons of flowers represent. The steamship owners roughly allow eight boxes to the cwt., or 160 to the ton, the weight of the boxes being included. According to this calculation, 82,240 boxes of flowers, which in the case of Narcissi contained 21 to 51 bunches (of twelve flowers) per box, and in that of Anemones 72 bunches, were sent out of the Scilly Isles in 1896. One grower, who appears to have larger boxes than those referred to above, says that he packs 36 to 100 bunches in a box; but the precise accounts kept at Tresco have enabled Mr. T. G. Brown, farm manager to Mr. Dorrien-Smith, to favour me with the statement that the number of bunches of flowers of all kinds averages about 7000 to the ton of flowers and boxes, and 514 tons would therefore be equivalent to about 3,598,000 bunches. The flower crop in 1897, although a good one, was not so heavy as that of 1896, and the exports fell off to 476 tons. For the present year (1898) they will be smaller in quantity, the crop having proved the worst ever grown, taking yield of flowers per acre. Various reasons for this comparative failure

are given, chiefly in relation to climatic vicissitudes in the two preceding years. Certain captious critics attribute it to bad cultivation; but a very small amount of consideration should have been necessary to convince them that a sudden deficiency after years of abundance cannot be mainly the result of faults on the part of the growers. That there are bad as well as good cultivators of bulbous flowers in the islands is admitted by Scilly authorities; but, as even the best growers had a poor crop this season, there must have been some cause apart from cultivation to account for the deficiency.

In 1870, according to Messrs. Scott and Rivington, the early Potato crop formed the main support of the Scillonians; and, as in the Channel Islands, Mangolds were often grown after it in the same season. Asparagus was also grown for the London market. Wheat, Barley, Rye, Oats to a small extent, and Clover extensively were produced at that time, mixed "seeds" being allowed in some places to remain down for three years. Even in 1890, when Mrs. Brewer's article was written, although corn and "seeds" had greatly diminished in area to make room for flowers, over a thousand tons of Potatoes were exported, while Asparagus and Seakale were produced somewhat extensively. At the present time no wheat is sown, and Barley and Oats are produced only for the feeding of live stock, while Asparagus has ceased to be produced for market, and Seakale is grown only to a quite insignificant extent. Even early Potatoes, favourable though the climate of the islands is for their production, as they have often been dug as early as the first week of April and occasionally in the last week of March, are grown much less extensively than they were produced when Mrs. Brewer wrote. There are not over thirty acres in St. Mary's this year, and although the crop is produced more extensively in proportion to total area in Tresco and Bryher, the total acreage has been much reduced. In all the islands it is about 125 acres this year. Profitable as Potatoes and other vegetables were—so profitable that a family, according to Messrs. Scott and Rivington, could live comfortably on the returns of five acres—flowers appear to pay better, or they would not have encroached upon the area formerly occupied by the other crops. It is to be observed that the freight on Potatoes sent to London averages about £3 a ton from the different islands, and this is a considerable disadvantage. Still, bearing in mind the earliness of the Scilly Potato crops and the high prices usually obtained for the first open-air supplies, the Scillonians will always have a good resource in the cultivation of culinary vegetables if the flower supply should be overdone. The extent to which flowers are grown is about 400 acres in St. Mary's, 43 acres in Tresco, 30 in St. Martin's, 15 in St. Agnes, and 15 in Bryher, making about 503 acres altogether, all but a comparatively small proportion of the area being devoted to the Narcissi. A few years ago large quantities of Wallflowers and Stocks were grown in St. Mary's, the former flowering in February or March, and the latter a little later. But now the quantities of these flowers produced in the Scilly Isles are small. The several varieties of the Narcissus make up the bulk of the market flowers, the only others of importance being Gladioli, Anemones, Marguerites, and Arum Lilies, though a few Freesias, Spanish Irises, and white Pinks, as well as the small quantities of Wallflowers and Stocks already mentioned are also grown. Bulbs have not been exported to any great extent from the

Scilly Isles. The newer varieties have been for the most part kept to increase the extent of their cultivation, while the common sorts are worth only 15s. to 30s. a thousand, the buyers, I believe, paying the freight to the various destinations. There is no considerable demand for the bulbs of some of the varieties most extensively grown in the Scilly Isles, and notably the Polyanthus varieties, as they are not cultivated for market at all commonly on the mainland. Besides, although some of the Scillonians grow bulbs well for market, this cannot be said of the majority. Mr. T. G. Brown has kindly prepared for me the following list of varieties of the Narcissus grown in the Scilly Isles, distinguishing the Daffodil and the Polyanthus varieties from the others:—

DAFFODILS.

Telamonius (the old double Daffodil)	Grandis
Emperor	Rugilobus
Empress	Princeps
	Obvallaris

POLYANTHUS VARIETIES.

Scilly White	Gloriosus
Grand Monarque	Jaune Suprême
Soleil d'Or	Mozart orientalis

OTHER VARIETIES.

Sir Watkin	Orange Phoenix
Incomparabilis (single)	Sulphur Kroon
" (double)	Barri conspicuus
Cynosure	C. J. Backhouse
Stella	Ornatus (poeticus ornatus)
Leeds varieties	Poetorum
Frank Miles	Poeticus plenus (double)
Odorus major (Camper-nelli)	Pheasant's-eye

Six of the original Scilly varieties are in this list, three being Polyanthus varieties. A few other varieties were noticed in visits to some of the principal growers, to be mentioned hereafter.

The violence of the frequent gales of wind renders shelter for the flowers necessary, and this is provided by fences usually consisting of Veronica, Escallonia or Euonymus, all three of which flourish in the islands, and are to be found in some places growing to a great height. Scilly growers have at least three great advantages in the production of bulbous flowers. The first and greatest is earliness of production; the second is suitability of soil and abundance of sunshine for bringing the flowers to a perfection of size and colour; and the third is suitability of soil and climate for promoting a good increase of bulbs. On the other hand, the growers have two disadvantages, the heavy cost incurred and long time occupied in conveying the flowers to market. The freight from St. Mary's to London is 8s. per cwt., and from St. Martin's (and presumably from the other outlying islands) it costs those who do not carry their own produce 1s. 6d. per cwt. extra to convey it to the quay at St. Mary's. Half the freight from St. Mary's to London is swallowed up in steamer freight, quay dues at starting and on reaching Penzance, and cartage to Penzance station. Bearing in mind the fact that about one-third of the weight on which the freight is paid consists of boxes, it will be seen that this is no slight tax upon the returns; and, in addition, there is a commission of 10 per cent. on the prices realised to pay the salesmen (or 5 per cent. if growers find their own boxes), with other charges, including the cost of returning empties, which are debited to the growers by the salesmen. As to the time occupied in conveyance to market, the steamers run to Penzance only three times a week in the height of the flower season. This by itself is a disadvantage in periods of sunshine, when

flowers expand quickly; but it is not all. Flowers loaded on the steamer at St. Mary's on one morning are not in Covent Garden until the next day, when they reach Paddington at 4 a.m. Consequently varieties of flowers which do not travel very well are sometimes in deteriorated condition when exposed for sale. Nothing, however, entirely counteracts the advantage of early production. The

SUPPLY OF NARCISSI

from the Scilly Isles begins with a few forced flowers at or before Christmas, while the earliest open-air varieties are usually ready at the beginning of January, occasionally in December, or in very backward seasons at the end of January, and successive varieties are sent to market up to about the end of May. Marguerites flower in the open all the year round; Anemones (*fulgens*) from December to March; Wallflowers, as already stated, in February and March; Arums, which withstand the winter in the open in Scilly, begin in April or May usually, but this year started in March; scarlet Ixias in May; Gladioli and Iris in June, with which month the flower season ends. These are the usual dates of flowering; but, it is hardly necessary to say, they vary with the seasons. While most of the growers who produce any considerable quantity of flowers possess one small unheated glasshouse, in which they keep their flowers for a day or two before packing them, the area of hothouses in the Scilly Isles is not large. Mr. Dorrien-Smith, in Tresco, has by far the greatest extent, namely, 28,800 square feet covered with glass. In St. Mary's only five farmers have any considerable extent of hothouses; in St. Martin's only three have even a small extent; in St. Agnes only one; and in Bryher, none. As the Narcissi are picked as far as possible before the blossoms have expanded, a small glasshouse is necessary for the proper preparation of the flowers for market. On being brought in from the fields, they are placed in whole-bottomed flower-pots containing water, in which they expand, and in some cases the water is warmed. The flowers expand better than they would in the fields, and travel better for being kept in water a short time, though this process is often overdone. Most of the hothouses are used for forcing Narcissi first, and for Tomatoes afterwards. The extent to which Tomatoes are produced in Scilly will be referred to in a subsequent division of this report. The Narcissus is the only flower forced, I believe, and the quantity thus treated cannot be very great. The varieties used for forcing by Mr. Dorrien-Smith are Soleil d'Or, Scilly White, Telamonius, Obvallaris, Gloriosus, Rugilobus, Grand Monarque, Princeps, Cynosure, Incomparabilis plenus, Orange Phoenix, and Ornatus. All kinds will force, Mr. Brown says, but some much better than others. As the great advantage of the Scillonians consists in being able to produce flowers cheaply in the open air as early as they can be obtained by forcing on the mainland generally, it is questionable whether there would be much or any benefit in the extension of hothouses. I am disposed to think that unheated glasshouses, such as are common in Guernsey, would be more economically advantageous. As this question is to some extent connected with the conditions under which land is held in the islands, it will not be out of place to write a few lines upon that subject.

THE TENURE

under which the farms of the Scilly Isles are held is practically hereditary, and in some cases holdings have been in the hands of the same

families for two or three hundred years. Although the agreements are yearly, and in most cases, I believe, verbal, evictions are almost unknown. Security for improvements rests mainly upon confidence in the permanence of the hereditary custom, though Mr. Dorrien-Smith invites his tenants to make known their desires as to improvements, with a view to arrangements as to compensation. Apparently the tenants are well contented with the friendly arrangements made between themselves and their landlord. As a farm almost invariably descends to a relative of a deceased or retired tenant, there is no competition as to rents, which range from 2s. 6d. per acre for rough grazing land to £3 for land suitable for flowers and in favourable positions. Although, instead of falling, as in most parts of the country, rents have risen in the Scilly Isles, they appear to be moderate under all the circumstances, including heavy and continuous expenditure on the part of the landlord for the advantage of the people. Rates are moderate, and there are no licences in Scilly. In this connection it may be mentioned that the general prosperity of the people is indicated by almost entire absence of pauperism. Each island supports its own poor, and there are now only five paupers in St. Mary's, one in Tresco, one in St. Martin's, and none in St. Agnes or Bryher. The

CULTIVATION

of the Narcissus is comparatively simple when once it has been ascertained whether any specified variety will flourish in a particular soil or climate. In Scilly the bulbs are usually planted in October, the small sorts about 4 inches by 2½ inches or 3 inches apart, and large bulbs about 6 inches by 4 inches to 6 inches. In some cases the land is carefully weeded up to the time of flowering, while in others it is left untouched during the growing season, so that it becomes covered with weeds. The manure most extensively used is a compost of seaweed, farmyard manure, earth, and road-scrappings, nitrate of soda or guano and bones being also used by some growers. Mr. Dorrien-Smith and other careful growers manure heavily for the preceding crop—usually Potatoes—and then, as they do not allow their bulbs to stand more than two or three years, no direct manuring of the flowers is necessary as a rule, though artificial manure is applied if they seem to need it. This plan is considered preferable to the direct manuring of the flower crop. But the majority of the growers allow at least some varieties of their bulbs to stand six or seven years, or even longer, and in such cases the crops may require supplementary manuring, though they do not always get it. The Scilly growers have been censured for allowing their bulbs to stand so long, and there is no doubt that the crops become overcrowded under such circumstances, with deterioration in the sizes of bulbs and flowers alike as the result. But the saving of the expense of digging up and replanting is a great consideration, and the Polyanthus varieties, which are usually left standing longest, are said to deteriorate less on that account than the Daffodils or some other varieties of the Narcissus. Still, the best growers maintain that no variety should be allowed to stand longer than three years, because, apart from the deterioration caused by the overcrowding of the increasing bulbs, a

frequent change of soil is needed for the Narcissus as much as for other crops. The different varieties of flowers are picked, as already stated, from the beginning of January, or occasionally a little earlier or later, until June, expanded in glasshouses, tied in bunches of twelve, packed in boxes, and shipped to the great markets of England and Scotland. The leaves, when they have died off, are removed, and sometimes used as food for cattle. If the crop is to stand, the soil over the bulbs is cultivated during the summer in order to kill the

half of the year, with an hour for dinner, and from 6 a.m. to 6 p.m. in the summer half, with time for breakfast as well as for dinner.

THE EXPENSE of growing Narcissi is one of the questions as to which growers are naturally reticent, and inquiries upon that point could not fairly be pressed, though growers are occasionally invited to disclose even more delicate particulars of their private affairs—as, for example, in the case of a leading Scillonian who recently received a letter from a lady, unknown to him, asking him how much his in-



Arundinaria nobilis at Menabilly.

weeds. For transplanting or marketing the bulbs are taken up in June.

PICKING is mostly done by men, and bunching by women and girls, assisted by men in their overtime when work is in full swing. Men's wages are 15s. a week; but they earn a great deal extra by bunching and packing by the piece in their overtime. Their regular hours are from 8 a.m. to 5 p.m. in the winter

come was. The expense of cultivation varies greatly with the time during which crops stand and with the cost of bulbs, some of which are purchased at very high prices, while others are simply the increase of crops grown in the islands, and worth very little to sell, if they can be sold at all. If a statement made by a grower on the mainland may be accepted as accurate, to the effect that 240,000 of small

varieties of bulbs are required to plant an acre, or about half as many of the largest, it may be readily imagined that the cost of planting even home-grown bulbs is by no means small, and that it is very heavy when varieties by no means the newest are purchased at £3 to £10 per 1000. With respect to new hybrids there is, of course, no question of planting by the acre, as they frequently command £5 to £10 per bulb, and I have seen one for which fifty guineas was refused. In the past very high prices were paid by enterprising Scilly growers for varieties now comparatively common, such as Emperor, Empress, and Sir Watkin. One grower informed me that he had paid £50 to £80 per 1000 for such varieties a few years ago, while another said that he had bought Sir Watkin at £30 earlier than the neighbour who said he had paid £80. This discrepancy I am not able to clear up; but when Scilly growers bought bulbs at even £30 per 1000, it is to be presumed that they planted only a few rods of land with them, and extended the area as the bulbs increased. The expenses of manuring, cultivation when properly done, picking, raising and collecting bulbs, packing, freight, and marketing bring the cost of growing Narcissi up to a large sum per acre. With respect to the returns, they vary enormously with crops and prices. A high authority informed me that a good crop of a particularly free-flowering variety at 1s. 6d. per dozen bunches would give a gross return of £100 per acre, and probably choicer and less productive kinds, sold at higher prices, make quite as good returns. But prices fell alarmingly in 1897, and although they were much better in the early portion of the present season, they have been extremely low at times since the end of March. Some details as to the fall in prices will be given presently in the evidence obtained from growers.

My visit to the Scilly Isles was made in the middle of March, and the earliness of production is indicated by the statement that by that time most of the varieties of the Narcissus extensively grown had been marketed. Mainland growers will understand this earliness when it stated that more than half the crop of Grand Monarque and about half that of Empress had been disposed of before March 14, while ornatus was just beginning to come into bloom in places. In consequence of the mildness of the winter the early varieties were ready a little sooner than usual, while the late sorts were checked by the cold weather of March. In the preceding remarks I have given to a great extent the information obtained during my stay in the islands, but it remains to give a brief account of my visits to typical farms.

Mr. Martin John Sutton kindly supplied me with introductions to Mr. Dorrien-Smith and two other large growers of flowers, one of whom, Mr. E. W. Banfield, met me shortly after my arrival, and drove me to his farm at Holy Vale, St. Mary's. This farm, of 30 acres, about 12 acres of which are occupied by flowers, has been in the hands of Mr. Banfield's family for 300 years. After walking through the flower fields, protected by excellent fences of Veronica or Escallonia, and noticing the flourishing appearance of the Narcissus plants, I was shown a beautiful display of cut blossoms of several varieties expanded in a glasshouse and ready for packing. In one day Mr. Banfield has sent away 3500 bunches of a single variety. Where the bulbs are allowed to stand for six to eight years, Twitch often gains a strong foothold in the soil. Referring to the mildness of the Scilly climate, Mr. Banfield said that the Narcissus crops had never been

killed by frost. They have been frosted, but have always recovered. The land has hardly ever been too much frozen for the plough to work. Four men are employed regularly upon the farm, with extra hands in the flower-picking season.

Mr. W. M. Gluyas, J.P., of Field House, St. Mary's, who is Dutch Consul for Scilly, as well as a flower grower, has thirty-six acres of cultivated land, including about ten acres of flowers, with 100 acres of rough grazing land. Among the first things noticed on this farm were Berberis Darwini in full blossom (on March 14), and the Arum Lily (*Calla aethiopica*) flourishing rampantly in the open ground, and just coming into blossom two months before its usual time. The flower (Narcissus) season started this year, Mr. Gluyas stated, at Christmas, though the beginning of January is a more common time for the first open-air supply, and in late seasons picking does not begin until February. He started this season with Soleil d'Or, and Scilly Whites were ready at the beginning of February, a few weeks earlier than usual. The old double Daffodil began to bloom at the end of January, and Wallflowers in February. Mr. Gluyas also grows *Anemone fulgens* and double white Stocks, ready in March; and Spanish Irises and scarlet and white Gladioli, which begin to bloom in May in early seasons, though the latter are more frequently June flowers. Although he is a fancier of Roses and grows them in his own garden, Mr. Gluyas said that they did not flourish in the Scilly Isles, as the soil did not suit them. Five men and one boy are employed regularly on this farm, and a few extra in the flower-picking season, with some women and girls to bunch and help pack.

Mr. Mumford, of Old Town, St. Mary's, has about fifteen acres of open-air flowers and some fine hothouses in which he forces Narcissi in the winter. His first supplies of forced flowers were ready this season a little before Christmas. The plants are kept out of doors, after being potted in the summer, until November, when they are taken into the hothouses. They will not bear forcing from the first. As an example of the fall in the prices of varieties once rare, but now grown very extensively, Mr. Mumford said that seven or eight years ago ornatus sold at 12s. a dozen bunches; whereas it now frequently realises only 1s.

The most extensive grower of flowers in St. Mary's is Mr. Francis Watts, of Old Town, who holds eighty acres of land, besides some rough grazings, thirty acres being occupied by bulbs. Ten men are regularly employed on this farm, extra men and women being required in the flower-selling season to do the bunching. Mr. Watts says that bulbs should not be allowed to stand more than three years, as they get overcrowded when they are left for six to eight years, and the blossoms are in consequence smaller than they should be. The crop should be changed to Potatoes, heavily manured, after which bulbs may be planted again. Mr. Watts has hothouses in which he forces Narcissi. He grows in the open, besides the Narcissus, the *Anemone*, *Iris*, *Marguerite*, *Gladiolus*, and a few other flowers.

Mr. Barnes, of Normandy, St. Mary's, farms 44 acres of land, 16 acres of which are under flowers. He informed me that he was one of the few growers, including Mr. Richard Mumford and Mr. Trevellick, who began to collect the bulbs growing wild in St. Mary's in or about the year 1870, though it was two or three years before he sold any flowers in the market. Mr. Barnes's flowers are grown in small enclosures sheltered by very high and luxu-

riantly growing fences, and his beds are kept admirably free from weeds. Some of the bulbs are grown between and under fruit trees, and they have a flourishing appearance. Guano and dissolved bones are used as manure. The newer varieties of Narcissi are allowed to stand only three or four years, but Scilly White and other old kinds six or seven years. Mr. Barnes is of opinion that the common sorts (chiefly the *Polyanthus* varieties) will stand "almost as long as you like," while Sir Watkin, Emperor, and others of the Daffodil division will not do well after standing three years. Alluding to the fall in the prices of new varieties, he said that six years ago the flowers of Sir Watkin sold at 14s. to 15s. per dozen bunches, and now are worth only 3s. to 4s., but, of course, a great fall from the extreme prices obtained for flowers when they were rare was to be expected, and it is to be borne in mind that the bulbs were also extremely dear when growers first purchased a few of them.

Mr. Methuselah Watts, another grower of the Narcissus in St. Mary's, occupies 18 acres of land, 12 acres of which are under flowers. He has a hothouse consisting of four spans 18 feet wide each, connected, and a movable glasshouse, which he places over portions of his Narcissus crop growing in the open ground when he desires to force the flowers. The same bulbs can be forced two years in succession when they are thus left in their original beds, whereas, when they are potted and moved to a fixed hothouse, they can be forced only once. Mr. Watts had some choice and beautiful varieties ready for packing at the time of my visit. The last grower of bulbs in St. Mary's visited was Mr. Trevellick, of Rocky Hill, already mentioned as one of the pioneers of the flower industry of the islands. Like other early growers, he named only four varieties as being at all common in Scilly when the flower trade was started—Scilly White, Soleil d'Or, Grande Monarque, and the common double Daffodil (*Telamonius*). At the outset, when there were only two or three sellers of flowers in Scilly, and the market was not well prepared for Narcissi, the price was about 5s. per dozen bunches; but later on, as the demand increased, the rate rose occasionally as high as 24s. per dozen bunches. Last year prices were so low that they were barely remunerative, but in the early part of the present season they were better. Many new varieties have been introduced into the islands at great expense; but Mr. Trevellick doubts whether it would not have paid best to stick to the old kinds. He grows 7 acres of flowers, and had many beautiful varieties in course of being packed on the occasion of my visit.

Small plants for decoration.—In the early months of the year all propagating cases and lights are usually full, but just now it is a slack time, and where a large demand exists for small creeping plants it is good policy to push their propagation a little now. The plants once they are struck need not be hurried along, but kept near the light and grown stocky, so that with the increasing light in the spring they will make fresh growth and be nice and bright for use. Small pots full of Club Moss and *Isolepis*, for instance, may be prepared, also small bits of Ferns, such as the *Pterises* and *Gymnogrammas*. It is seldom that one gets over-stocked with such, and they often prove useful for associating with small pots of forced bulbs. *Pilea muscosa* again is very useful, the pretty fresh green of the fronds making a capital setting for bright-coloured flowers. The green and purple *Tradescantias* strike readily without any bottom-heat or without a propagating case, but *Fittonias*, *Panicums*, and the more brightly tinted of the *Tradescantias* need a little

encouragement. The less they are watered overhead during the time they are in the frame the better, as this is apt to lead to their making leaves of poor substance, that are sure to fall off at the first slight check. The harder they are grown from the first, the better they stand.

BIRDS AND FRUIT GROWING.

IN the *Field* of Sept. 9, page 470, is a note from Mr. F. Boyes, of Beverley, describing the great damage done to the fruit crops this season by blackbirds and thrushes. He states that in his district no fruit crop has escaped them; they have even attacked his Apples and quite destroyed his crop of Victoria Plums. I can fully confirm this statement as regards the fruit grown within ten miles of London. In my own garden I have not picked a single Strawberry this year. The bush fruit of all kinds has suffered greatly. Cherries cannot be grown without netting, as the trees are stripped by the starlings as soon as the fruit is ripe. My own suburban garden is chiefly devoted to Apples and the choicer kinds of dessert Pears. Both of these have been seriously attacked. The early cooking Apples, such as Lord Suffield, Rieger, were not attacked, as the softer bush fruit was more attractive, and the Apples were gathered before the small fruit had all been picked; but the later crops have suffered greatly and have had to be gathered. In my own case the Pears have all had to be protected, or I should not have a single one left, every one being attacked as it became ripe. When good eatable Pears cannot be bought even off the barrows in the retail markets in London under from 2d. to 3d. each, they are well worth some trouble to protect. My garden has recently presented the spectacle of trees bearing some hundreds of muslin bags, each containing a Doyenné du Comice, Beurré Superfin, or other good variety, but the process of protection is troublesome and expensive, although the bags do for successive years. Pears suffer mainly from the attacks of the tits, which hold on to the stalk of the hanging fruit by one foot and peck a hole near the upper part. This is at once utilised by wasps; rain enters, and the Pear is not only rendered unsaleable, but is spoiled for domestic use.

With regard to the adverse influence of many birds on the increasing pursuit of fruit farming, I may quote a communication I have received from Sir Walter Gilbey, who, some ten years ago, commenced with a fruit farm on 4 acres of rather heavy land at Elsenham, Essex. The crops were most successful, and the fruit culture was rapidly extended, so as to include Victoria Plums, Apples, bush fruit, Gooseberries, Strawberries and Raspberries, and now 50 acres are under cultivation; but each year the number of birds steadily increases, and the damage done by them can hardly be over-estimated. Thrushes of the various species and blackbirds abound, and are shot by dozens. Sparrows are kept in check to some considerable extent by the local sparrow club, but Sir Walter estimates that many tons of the Strawberries and Raspberries are destroyed by the birds, which have greatly increased, owing to the recent county council enactments. In his desire to benefit the agricultural population Sir Walter has let out a large field in allotments for Strawberry growing, he having tilled the ground and stocked it with Strawberries adapted for preserving. The fruit is picked by the allotment holders, delivered at the jam factory, and purchased at the rate of 2½d. per pound. During the last season upwards of 2 tons were gathered, returning the allotment holders nearly £50; but although these Strawberry allotments were immediately in front of the cottages, the holders found it necessary, during the time the fruit was ripening, to pay an old man past laborious work to scare away the blackbirds and thrushes; otherwise, being so numerous, they would have destroyed the crop. This he accomplished with a rather comic arrangement of sitting from sunrise to sunset in the middle of the allotment in an extemporised shelter, and having near each corner

of the allotment ground an old tin kettle containing stones freely suspended, and from these kettles strings led to his central station, pulling which enabled him to make a terrific din which frightened away any birds that approached or settled.

The craze now existing for the preservation of birds of all kinds, injurious or otherwise, will undoubtedly lead to a reaction. At the present time the utmost nonsense prevails regarding them. We have in the *Times* of this week the killing of a couple of farmyard Muscovy ducks and their young recorded as a violation of the Wild Birds Protection Act, and as a wanton destruction of rare birds. The evil of ill-considered and useless legislation is already making itself felt in other countries beyond our own. In a recent work on the "House Sparrow" I recorded the fact that whilst other birds are allowed to be shot, this injurious species was ignorantly protected by the French legislature. On my visit to the vineyards during the present autumn I found the sparrows had largely increased, and in the trees surrounding the château in which I was staying I for the first time noticed the nightly accumulation of the sparrows at roosting time, such as may always be heard in the autumn in the trees in England in places where these birds abound, and in the vineyards they are now loudly complained of as attacking the ripe Grapes.—W. B. TEGETMEIER, in *Field*.

—I read with interest "S. E. P.'s" remarks on the above subject. In one garden to which birds of all sorts had free access, no gun being used from one year to another, I was annually much annoyed by blackbirds and thrushes spoiling most of my best Apples. Most of the trees were in espalier form, and although fish nets were used and even placed over double, they thrust their beaks through the meshes, working much mischief in a single day, or, I might say, morning, as it is before the workmen are about that they make their chief raids. As "S. E. P." remarks, these pests usually select the finest, best-coloured specimens, and a few minutes suffice for completely scooping out a large fruit. No doubt firing a gun a few times has a terrifying effect, though in time they seem to get accustomed to anything. In regard to tomtits pecking Pears I may say that in the same garden I always had to net my wall trees in September with small mesh netting, or all the best fruit of some varieties would have been spoiled. One favourite tree of Marie Louise in close proximity to a wood was in dry autumns annually attacked by blackbirds and had to be netted.—J. C.

ROSE GARDEN.

CLIMBING ROSES.

SINCE the advent of Crimson Rambler much attention has been directed to this useful class. Although many of the kinds now largely grown are of modern introduction, some of the best are also some of the oldest. For instance, just now that fine Rose Aimée Vibert is brightening our walls with its snowy blossoms, which harmonise so beautifully with the rich shiny green foliage. This Rose is doubly valuable, for it not only flowers freely in the summer when Crimson Rambler is blooming, but it also gives a welcome late autumnal display. If we could but infuse this late-flowering quality into the true climbing Roses, a good work would be achieved. Where climbing Roses are mingled with late-flowering Clematises the absence of blossom upon the Roses is not so marked, but arches covered with summer-flowering Roses alone appear in the autumn rather dismal. A fine late-flowering variety as well as an early one is Longworth Rambler. It is really not so rambling as the Multiflora and Polyantha sections, but it is so good that no one who has a fair-sized garden can afford to overlook it, and, moreover, it retains its shiny foliage well over Christmas. As a good companion to Crimson Rambler, the bright yellow Aglaia must become very popular. It appears to be quite as

hardy as the former, and I can vouch for its rampant growth. The only fault with it so far is its shy blooming. All who have this Rose should not prune it in any way; simply allow it to grow at will, and the raiser says by the third year it will be smothered with large pyramidal trusses of bright yellow blossoms, which are individually about the size of those of Gloire des Polyantha. Those who desire a bold effect from these rambler Roses must be prepared to exercise considerable patience, and eventually they will be rewarded. Aglaia takes some of its beautiful yellow colour from one of its reputed parents, Rêve d'Or, although its growth is distinctly that of the seed parent, Rosa Polyantha. The raiser, Herr Lambert, has met with much success in his efforts at crossing these rambling Roses. A promising kind, a seedling of Crimson Rambler, is one named Helene, having large trusses of delicate violet blossoms. Among his novelties for this year he has a variety named Leonie Lamesch, which should prove a valuable acquisition. Herr Lambert in his cross-fertilisation experiments has adopted a method likely to lead to good results—that is, he crosses some of his seedlings with each other that are themselves the result of crosses. Thus a strange mixture of varieties takes place that must certainly produce good and unlooked for novelties. Psyche will certainly make a very pretty Rambler. The rosy pink, charmingly shaped buds, produced as they are in large trusses, will be a welcome addition to this tribe. The old variety Félicité-Perpétue is a capital white companion to Crimson Rambler. Its beautiful rosettes of white blossoms are well known. If one were quite sure as to its hardiness, Claire Jacquier would be the Rose to plant where a vigorous climber is desired. It will make quite an arbour in itself with just a slight amount of support, and its pretty bunches of nankeen-yellow blossoms, individually as tiny as those of Perle d'Or, would be a charming feature in a garden. Although it is reputed to be tender, I am inclined to think this to be more imaginary than real. A few years ago all Teas were looked upon as only fit for greenhouses, and to day probably no tribe is more extensively grown outdoors than this and its kindred class, the Hybrid Teas. One of our largest growers has his Teas upon the top of a hill, and he never protects them. Of course, it is well known that Roses and fruits suffer less from frost upon hills than they do in the valleys, but yet even here some years ago we should have been afraid to leave our Teas unprotected. Doubtless most gardeners are aware of and utilise the Crimson Rambler as a decorative plant for the early spring months. Plants procured with 8-feet to 10-foot shoots, these twined around three or four sticks, will bloom most profusely and are a valuable addition to the usual decorative plants, especially where required to stand in recesses, fireplaces, &c. Plants procured now in 8-inch pots would require no preparation beyond an examination of the crooks and a top-dressing of good compost. When the flowering period is over, repot and afford them plenty of heat and moisture; they will then make some good growths for the next season's crop.

PHILOMEL.

The Indian Rose at Delgany.—I was very glad to see the beautiful and characteristic photograph of Rosa moschata as growing and flowering on the post office and other cottages in the village of Delgany, Co. Wicklow. As is well shown by the photograph, this fine old rambling Rose extends along the eaves of the little cottages, being trained and spurred back Vine fashion every year. Indeed, were this not done it would long ago have covered the roofs of the cottages, as it has done the old kiln at Mount Usher, where Messrs. Walpole, observing its beauty at Delgany, introduced it some years ago. Where there is ample space on pergola, arch, wall, or tree this is one of the best of all the single-flowered cluster Roses, and well deserves to be more extensively planted, especially as this variety seems superior to the ordinary type. Delgany lies a mile or so inland

from Greystones and the sea, and it is a very pleasant walk from the railway station at Greystones, across the golf links to Killencarrig, past the Cherry orchards, and then up the road till Delgany is reached. Not only did the La Touche family bring this beautiful climbing Rose into cultivation here, but their influence and patronage on the gardens and gardening of the district were far-reaching and most encouraging. One of their gardeners, the late Mr. Pennick, took a plot of ground—30 acres or so—on their estate, on part of which he established a thriving nursery, growing what at that time were rare and valuable shrubs and trees. This nursery is still in existence at Upper Kendalstown, and contains fine specimens of *Pinus insignis*, *P. pinea*, and other conifers, and until recently it was rich in Himalayan *Rhododendrons*, &c. *Erica arborea* grows 10 feet to 15 feet high there, and *Drimys Winteri* is nearly 20 feet and flowers freely. There are also fine male and female *Araucarias*, healthy to the ground, and a quaint old *Arbutus procera* near the old greenhouses, but the place is not so rich in rare shrubs as it was when first I saw it twenty years ago. *Photinia serrulata* grows wonderfully well here, its young foliage being intense crimson in colour, and in the village of Delgany there is a very fine specimen fully 20 feet high, and the most perfect in health and symmetry I have seen. *Hypericum triflorum* was distributed from Pennick's nursery twenty-five years ago, but it is not there now, I believe. Soil and climate are well-nigh perfect, and there are extensive views towards the sea.—F. W. B.

NOTES OF THE WEEK.

Rose Laurette Messimy.—We have this Rose in fine showy bloom, many flowers and buds, on the last days of November in an open position within thirty miles of London. This is six months' duty this beautiful Rose has done for us this year.

A curious form of *Anemone japonica*.—I have sent you leaves of a remarkable form of *Anemone japonica cristata*. They have been, unfortunately, frozen; consequently have passed their best. It is sufficient, however, to show you how very distinct it is from anything else in that way.—AMOS PERRY.

***Saintpaulia ionantha*.**—The pretty violet-blue flowers of this plant are a considerable attraction when the plant is flowering freely and also grown in considerable quantity. It is so to be seen just now at Syon House, where the plant is largely grown by Mr. Wythes for use on the margins of the stages. In such instances the plants crop up here and there among grasses and other equally interesting material, the rich violet blossoms having a most distinct appearance.

***Pelargonium Ian Maclaren*.**—This is perhaps one of the finest of the more richly-coloured salmon shades in these showy flowers, the colour being almost salmon-scarlet, with salmon margin. Apart, however, from its colour it is a free bloomer, medium-sized plants in 7-inch or 8-inch pots carrying something like a score of fine heads. This variety was among the most attractive in that unique lot that Captain Holford sent last week to the Drill Hall.

***Campanula pyramidalis alba*.**—It is surprising how this charming Bellflower continues to expand each and every blossom on the stem. Commencing its flowering quite early in July, the plants have maintained an unbroken chain till now, though the actual flowering, so far as effect may be said to be produced therefrom, has ended some few weeks since. All the same, from a height of about 6 feet to within an inch or so of the earth blossom upon blossom has emerged from the stem, and though these later ones have greatly diminished in size, they are still quite pure and good in form at the very end of November.

***Masdevallia tovarensis*.**—A very beautiful effect was secured by some plants of this pretty Orchid at the Drill Hall a week ago. The plants were sent by Messrs. Paul and Son, Cheshunt, who grow the plants with but little heat at any season. In this way at flowering time the flowers, if on dwarfier stems, are at least sturdier and calculated to endure longer when cut. In any case the group referred to in some degree shows what the amateur with but little heat may accomplish, as not only these, but *Cypripediums* and

some *Odontoglossums*, especially *O. crispum* var., succeed admirably in cool structures, and with a little care quite a goodly assortment may be catered for.

***Sternbergia lutea*.**—Referring to the various notes about this plant, I beg to state that I had all the species and sub-species under cultivation here, but none has been so satisfactory as the *Platten*, see variety of *S. lutea*. This is sure to flower, either a little sooner or a little later, from the end of September to the end of November. A clump has still (Nov. 27) a few flower-buds, *S. macrantha* and *S. Fischeriana* bloom but once on big imported bulbs, but the colder climate of the middle parts of Europe does not ripen flower-buds for the next season, and the bulbs gradually dwindle away.—MAX LEICHTLIN, *Baden-Baden*.

***Caryopteris mastacanthus*.**—In reply to Mr. Arnott, I can say that *Caryopteris mastacanthus* has flowered well with me for the past two seasons, but I think it is a bush that does not improve with age—I mean in the quality and size of flowers. Some young cuttings struck last year have made splendid growth and flowered well—better than the parent. *Clerodendron trichotomum* has done remarkably well this season, being covered with its large and beautifully-scented blossoms. It was visited by many of the humming-bird moths. My garden is about 250 feet above sea level.—H. MITCHELL, *Rush Green, Hertford*.

—With regard to the hardiness of *Caryopteris mastacanthus*, my own experience in South Derbyshire is as follows: Some four years ago I received a rooted cutting of this among the plants distributed by the Royal Horticultural Society, and it was planted at the foot of a wall facing east, where it has since remained without any protection whatever being given to it in winter. It is not trained to the wall in any way and now forms a bush about 4 feet high, which was covered with bloom about a month ago. It has flowered profusely every year.—H. S.

***Pinguicula caudata*.**—A beautifully-flowered group of this pretty plant was recently noted at the Drill Hall. The prostrate leaf tufts from which the brilliant carmine blossoms issue render it always an attractive plant, particularly so in groups, as in this case. The plant really presents no difficulty to the cultivator, provided always it has its fill of moisture and is given a cool position uniformly so at all times. Flowering, too, as it most frequently does, quite late in the autumn when the surroundings are as gloomy as can be imagined, the plant is particularly welcome by reason of its brilliant flowers. The species is also well grown at Syon House, where we have lately seen it flowering. In Syon Gardens it is the companion of not a few choice cool Orchids.

***Arbutus Unedo Croomei*.**—The exhibit of this that Messrs. Veitch brought to the last meeting of the Royal Horticultural Society when seen in good established plants or in groups would certainly make a pleasing addition to this class of hardy shrubs. The colouring on the exposed surfaces of the bell-like clusters of blossoms is very pretty and distinct, and in the mass is very attractive. In certain districts these *Arbutuses* are very free both in growth and flowering, one such being the district around Bath on the Weston side, where numerous large examples may be seen in excellent condition. These, however, are principally of the old type, to which the above would make a capital companion. It is evidently as free as the original kind, and merely requires age to bring it into greater prominence.

***Chrysanthemum Admiral Symonds*.**—A few years since quite a stir was made about this pleasing semi-double variety, and not a few growers for market made a very considerable hit by growing this kind while the rage for it lasted. This of course was all too brief, and now the same kind is not cared for and few trouble to grow it. But the variety still maintains its old-time beauty, and those who appreciate flowers of its class, with available stems of perhaps 20 in. long, will not be disappointed with it from a decorative standpoint. It may be planted out and lifted

with good results where some attention can be paid to summer watering; but for this class of work it is not well to indulge in too late stopping. The colour varies from pale to deep canary-yellow. As a late November bloomer it is by no means to be despised where light, graceful flowers are preferred to huge lumpy ones.

***Stokesia cyanea*.**—Stokes's Aster is one of the plants which can be flowered by the Devonshire readers of THE GARDEN, but is seldom of use with us in the north. It comes into bud too late and seldom opens. I am aware that it sometimes appears in stands of hardy flowers in the west of Scotland, but I believe it is then the result of greenhouse cultivation for at least part of the year. Several years ago, in going through the garden of a keen exhibitor, I saw several pots of *Stokesia cyanea* in a greenhouse. Upon making inquiry I was informed that they were intended for a stand of cut herbaceous flowers. If the letter of the show schedule was not broken, one would think that the spirit of it was being disregarded. Now that we have so many Asters we have little reason, perhaps, to regret our inability to flower the *Stokesia*. It is, however, so fine in its way that one is not willing to admit failure in blooming it.—S. ARNOTT.

Double *Cyclamen*.—The so-called doubling of some flowers, while regarded by the hotanist as monstrosities, is not objectionable to a large number of people. Of this number very few, I expect, would be in favour of a double flowered strain of *Cyclamen*. There is a pleasing uniformity in the simple reflex of the corolla in these plants which any considerable addition thereto would seem to diminish, if not destroy. The feather on the petals is quite another matter, and this does not interfere in any appreciable degree with the calyx cup, as would be the case by the introduction of an indefinite number of petals. Usually when an addition to the number of petals occurs, the addition is forced out of place and the grace and beauty the flower once possessed are lost. Certainly such forms are not so attractive, and, above all things, no group appears less suited to this so-called doubling than the *Cyclamen*. Seekers after novelty may see something in the change and may hope to evolve great things out of the same, but from the point of added beauty and utility they are a step in the wrong direction.—E. J.

***Aralia Sieboldi variegata* in flower.**—In the glass-covered entrance to the Chiswick gardens of the Royal Horticultural Society a finely-developed plant of the above has produced a couple of large branching inflorescences. These have become a very considerable attraction by reason of the fine development of the heads of bloom. The blossoms are creamy white, arranged in quite globular heads. The inflorescence is pyramidal, the laterals radiating almost horizontally from the main portion, terminating with one of the globular heads referred to. A closer view reveals a singularly beautiful arrangement of the blossoms, which individually are somewhat Hoya-shaped, while closely arranged in a perfectly rotund head. These heads are of many sizes, and the whole surmounting the rich glossy foliage, well marked with its creamy variegation, is seen to advantage. The value of this practically hardy plant with the protection here afforded is materially enhanced, not merely from the much finer leafage, but by enabling it to throw up its fine heads of flowers that in the open garden appear too late to admit of their development.

***Crocus ochroleucus*.**—Through the kindness of Mr. E. A. Bowles, of Waltham Cross, I have just received a pretty form of *Crocus ochroleucus*, a pleasing autumn-flowering species whose only fault here is that it is not so hardy as one would like. The form received from Mr. Bowles appears to be rather smaller and more shapely than what I have up till now grown. All those I have had have been pretty with their creamy white segments marked with yellow at the base and their yellow tube. It is a *Crocus* one would like to have in a large clump instead of in the shape of the few plants one has to be thankful to possess.

Some day, it may be, these charming autumn and winter Crocuses will be so much sought after that they will be as largely grown as some of the popular Dutch varieties. In the meantime those who care for them must, as the late Colonel Trevor-Clarke once told me in an interesting letter about the flowers, "uphold the banner of the Crocus" and bring them before the notice of other admirers of floral beauty. The one under notice deserves a place among the others despite its comparative tenderness in my garden. It comes from Northern Palestine and the borders of Syria.—S. ARNOTT.

A note from Carsethorn, N.B.—Dahlias here are over for the year, but a few Sweet Peas remain to day (November 27). *Tropaeolum Lobbianum*, which was injured by the frost in October, is growing again and is giving a few blooms. Monthly Roses and Longworth Rambler are still in flower, and a fine bloom of Mme. Isaac Pereire was cut on the 24th. It is finer in autumn than in summer. There are yet some Starworts, and *Erigeron speciosus* has some blooms upon it quite equal to those it gives us earlier in the year. *Linum flavum* does not open, but it yet shows abundance of its bright yellow pointed buds. *Oxalis Bowieana* is in like state. It gives little colour now with its rolled up flower-buds, but it is invaluable for months at a time. Mr. Buxton's variety of *Anthemis tinctoria* retains its almost perpetual blooming properties. Marigolds are gay yet, and give some colour. A few Chrysanthemums are in bloom, among them being some of the newer early varieties which were belated because of the dry weather which set in after they were planted. Chrysanthemum coronarium is also in bloom. So is *Saponaria calabrica*, whose bright little flowers carpet the spot where Poppy Anemones and Snowdrops will afterwards appear. *Mecynopsis cambrica* and *Papaver nudicaule* are both in bloom, and the annual Scabious have not yet departed for the year. *Galanthus Rachelæ* gave a couple of its pendent earrops, but the slugs soon discovered that they were toothsome. Others are on the way. Crocuses and Colchicums yet give us flowers, but they also need guarding from the depredations of the slimy pests. *Campanula Portenschlagiana*, *C. persicifolia*, and some one or two others of the genus have not left us, and the pretty Primrose in two or three colours is welcome now. By the doorway a low plant of *Jasminum nudiflorum* clambers up the evergreen Rose and looks gay with its yellow flowers. Still higher up is a hardy Fuchsia, whose flowers, though a little bleached by the weather, are acceptable still. Mr. Harpur-Crewe's double Wallflower has anticipated its single companions, and a copper coloured *Verbascum phoeniceum* has thrown up a dwarf spike. *Papaver rupifragum* is also in bloom. Hydrangeas have not yet left us, and one might give a wonderfully long list of other plants which yet give some brightness to dull, but mild days.—S. ARNOTT, Carsethorn, by Dumfries, N.B.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, December 5, in the Drill Hall, James Street, Westminster, 1-4 p.m. A lecture on "Some of the Plants Exhibited" will be given by the Rev. Prof. G. Henslow, M.A., at 3 o'clock.

National Chrysanthemum Society.—The executive committee of the above society held a meeting at Carr's Restaurant, Strand, on Monday evening last, when Mr. Percy Waterer presided. The minutes, &c., having been duly dealt with, Mr. Harman-Payne made a brief statement concerning the visit of the National Chrysanthemum Society's deputation to the recent Lyons show of the French Chrysanthemum Society, and expressed satisfaction on the part of his colleagues and himself at the very warm reception accorded to them—a formal report being promised for the next meeting. It was also moved that the newly-formed Danish Chrysanthemum Society be admitted in affiliation. The awards made at the

society's show last month were then considered, and duly confirmed the amount of prize money amounting to £366 13s., while various medals for miscellaneous exhibits were given in addition. It was arranged that the annual dinner be given to the members of the floral committee at the conclusion of the season's work. Fourteen new members were elected, and the treasurer gave a brief report on the financial position, which was regarded as satisfactory.

PUBLIC GARDENS.

CHRYSANTHEMUMS AT WATERLOW PARK.

CONSIDERABLE improvement in the housing accommodation has been made at this park, the glass structures formerly used having been renewed or lessened in their height, thereby giving the display a more pleasing and neat appearance. As compared with other seasons, the display is distinctly ahead of other years, many of the plants developing blooms of the highest quality, and most of them of remarkably good and bright colour. From an educational point of view there is much for the ordinary visitor to learn. Most public displays, including the shows of local societies and such exhibitions as are held by the National Chrysanthemum Society, are more or less monopolised by the huge Japanese blooms, until many a casual observer has come to regard the Japanese type of the Chrysanthemum as the only one grown, or at least worth growing. Mr. Pallett, the superintendent here, however, has a mind not by any means narrow, and, seeing that his object is to interest and educate the public, has been wise enough to provide variety both in types and forms. Because of this fact Japanese, which of course predominate, are ably supplemented by blooms of the incurved, Anemones, pompons, and singles, and as these different forms are pleasingly intermixed, their various characteristics are beautifully brought out, the smaller blossoms contrasting well with the larger and bolder flowers. One large and lofty square house has a pathway running between two huge banks of plants, and running out from this is a long range of vineries, with charming groups arranged along each side a path of good width. Standing out conspicuously from other Japanese sorts were Graphic, which had handsome blooms of good colour, evidently from a late bud selection, and Lady Hanham, the lovely cerise tinted chamois sport from Vivand Morel. These plants were grown quite freely, and were giving blooms of good colour. The parent variety, Vivand Morel, was also represented in good form, late buds giving lovely silvery mauve blossoms. Chas. Davis was developing blooms of a rich reddish bronze colour, and these were of large proportions. Joseph Chamberlain was seen in splendid condition, the blooms being exceptionally large and full, the glowing crimson colour of the inside of the florets contrasting favourably with a golden bronze reverse. President Bevan is thought much of, its pretty yellow colour, tinted rose, making a refined incurved Japanese bloom. A variety rarely met with is a creamy white named Queen of Portugal, this passing to a pure white with age. The lovely white blossoms of Mrs. C. Blick were frequently met with. Lady Byron was just past its best, its large chaste blossoms of pure white serving a useful purpose in the early part of the season. The blooms of John Shrimpton, although not by any means large, gave a welcome bit of rich crimson colour here and there; so, too, did G. W. Childs, the flowers of which also are only of medium size, but the colour is the brightest shade of crimson, invaluable for conservatory displays. A few exceedingly fine blooms of Eva Knowles were in the pink of condition, and rarely, if ever, have better flowers of this variety been seen. A somewhat new incurved Japanese sort is Samuel C. Probyn, colour cherry crimson, with a silvery reverse to the petals, making a large, massive flower on a dwarf habit of

growth. The delicate whitish primrose blossoms of Miss Elsie Teichmann were very noticeable, contrasting well with the richer self-coloured flowers. Other Japanese sorts worthy of mention as being in good condition were the popular bright yellow Phœbus, freely grown; Louise, pearly blush, dwarf and fresh so late in the season; and Mlle. Marie Hoste, a creamy white, almost a forgotten sort now. Numerous highly coloured blooms of Val d'Andorre were frequently in evidence. President Borel, a rosy purple, is still regarded with favour; W. H. Lincoln with its rich yellow though rather stiff, erect petals, was seen in good form, and the lovely silvery pink Comte F. Lurani carried several blossoms of a useful size.

Incurved varieties were pleasingly interspersed, Mrs. Geo. Rundle and its sports, George Glenny and Mrs. Dixon, carrying numerous blossoms of a dainty kind, and D. B. Craze, the golden-buff sort, was in good condition. The richly coloured blooms of Descartes, La Marguerite, M. C. Lebecqz were the best representatives of the Anemones, while of the pompons there were numerous plants, freely flowered in most cases. The best were Mme. Marthe, white, and Golden Mme. Marthe; Rubrum Perfectum, deep rich crimson, rather late; Perle des Beautés, bright rich crimson; President, rosy purple; Mrs. Mardlin, a pale rose sport from the last-named, and numerous plants of the bright crimson Howard H. Crane. Marie Stuart was the best of the Anemone pompons. The rosy purple J. B. Duvoir was used largely for the front rows.

The proposed extension of Brockwell Park.—At a recent meeting of the Lambeth Vestry a report was received from the special committee appointed to consider the expediency of acquiring, as an addition to Brockwell Park, Herne Hill, an area of about 42½ acres adjoining the park. The existing park contains about 84½ acres. The committee came to the conclusion that it was imperatively necessary, in the interests of the growing population of Lambeth, to prevent the erection of buildings on the open space adjacent to Brockwell Park and to preserve this fine piece of country for town dwellers. They therefore recommended that the vestry subscribe the sum of £15,000 towards the purchase of the additional land, the sum to be raised by a loan for fifty years. The motion was carried unanimously.

Trade commissions.—By the honesty of a servant the following has come into my hands: "Dear Sir,—I trust the enclosed present will reach you safely. Your kind acknowledgment will oblige." These words are lithographed, and bear the address of one of the first firms of nurserymen. The "present" amounted to a very large percentage on a small account, and of course came out of my pocket. This is the third case of similar dishonesty, each case affecting a different firm, which has come to my knowledge within the past year.—W. G. RUTHERFORD, Dean's Yard, Westminster, in Times.

The weather in West Herts.—A very warm week for the end of the autumn. The nights have been lately very warm, while the day temperatures have remained nearly as unseasonably high. The temperatures below ground have been getting gradually higher during the past week, so that the readings both at 1 foot and 2 feet deep are at present about 3° warmer than their respective averages for the time of year. No rain has now fallen for nearly three weeks, and no measurable quantity of rain-water has come through either percolation gauge for the last five days. On the 25th the atmosphere was remarkably calm, the mean rate of movement of the air at 30 feet above the ground being less than a mile an hour. On only three of the last thirteen days has any sunshine at all been recorded.—E. M., Berkhamsted.

Name of fruit.—Jas. McKenzie.—Grape Black Hamburg.

THE GARDEN.

No. 1464.—VOL. LVL]

[DECEMBER 9, 1899.

INDEX.

(Illustrations in Italics.)

Ferns:—	<i>Iris</i> , English 456	Stove and Greenhouse:—	<i>Caryopteris</i> 465	<i>Chrysanthemum</i> 469
<i>Ferns</i> , basket 449	<i>Iris</i> , Spanish 456	<i>Abutilon</i> Golden Fleec .. 460	<i>albus</i> 465	<i>King</i> 469
<i>Ferns</i> for decorating rooms.. 450	<i>Melanthus</i> major 455	<i>Aristolochia</i> elegans .. 460	<i>Tamarisk</i> at Kew 464	<i>Colchicum</i> Sibthorpi .. 469
<i>Ferns</i> , notes on h. rdy .. 450	<i>Melanthus</i> pectinatus .. 455	<i>Heliothila</i> scandens .. 459	<i>Tamarisks</i> 464	<i>Flowers</i> , December .. 469
<i>Ferns</i> , sunlight for .. 449	<i>Melanthus</i> pectinatus .. 455	<i>Nerine</i> Fothergilli major .. 459	<i>Yew</i> tree poisoning .. 455	<i>Galanthus</i> Richelae .. 469
<i>Selaginellas</i> for market .. 449	<i>Michaelmas</i> Daisies .. 455, 457	<i>Nerine</i> Fothergilli major .. 459		<i>Lavatera</i> assurgentiflora .. 470
Kitchen:—	<i>Primroses</i> , double 456	<i>Pelargonium</i> , zonal .. 459	Orchids:—	<i>Pelargonium</i> Lady Newton.. 469
<i>Asparagus</i> 451	<i>Pyrethrum</i> uliginosum .. 451	<i>Piognicula</i> caudata .. 460	<i>Cattleya</i> citrina 465	<i>Plants</i> , bulbous, thin carpets
<i>Beet</i> 451	<i>Sternergia</i> lutea 456	<i>Salvia</i> splendens grandiflora .. 460	<i>Cochlidodas</i> 465	<i>over</i> 470
<i>Beet</i> , Turnip-rooted v. long-rooted .. 451	<i>Verbenas</i> 456	<i>Stove</i> plants, arranging .. 460	<i>Cologyne</i> speciosa .. 465	<i>Saxifraga</i> apiculata .. 461
<i>Brussels</i> Sprouts, quality in .. 450	<i>Violet</i> James Watt .. 455		<i>Cymbidium</i> Traceyabum .. 465	<i>Saxifraga</i> Cymbalaria .. 469
<i>Onions</i> , large 451	<i>Violets</i> , strong-growing .. 456	Week's Work:—	<i>Oncidium</i> sarcodes .. 466	<i>Tanacetum</i> argenteum .. 469
<i>Pars</i> , vegetable refuse for .. 451	<i>Violets</i> , winter 457	<i>Fruits</i> under glass .. 461	<i>Ornithocephalus</i> grandiflorus .. 465	<i>Tulipa</i> Sprengeri 469
<i>Potato</i> Carter's Snowball .. 452	Chrysanthemums:—	<i>Kitchen</i> garden, work in the .. 460	<i>Phaius</i> grandifolius .. 465	Books:—
<i>Potato</i> Striking Castle .. 452	<i>Chrysanthemum</i> Comte de .. 458	Orchard and Fruit:—	<i>Zygopetalum</i> Mackayi .. 465	<i>"Catalogue of Plants in</i>
<i>Tomatoes</i> , notes on .. 451	<i>Germing</i> 458	<i>Apple</i> Bismarck 462		<i>Abbotsbury Gardens</i> " .. 470
Roses:—	<i>Chrysanthemum</i> Mme. E. .. 458	<i>Apple</i> Cox's Orange Pippin .. 462	Societies:—	Law:—
<i>Rose</i> Comtesse F. Hamilton .. 454	<i>Roger</i> 458	<i>Apple</i> Cox's Orange Pippin .. 462	<i>National</i> Chrysanthemum .. 467	<i>XL</i> All Vaporiser 470
<i>Roses</i> for the shrubbery .. 454	<i>Chrysanthemum</i> shows, prizes at .. 457	<i>Apple</i> Gascoigne's Seedling .. 462	<i>Royal</i> Horticultural .. 466	Obituary:—
<i>Roses</i> , town 454	<i>Chrysanthemums</i> , coldling .. 457	<i>Figs</i> , late 462		<i>Protheroe</i> , Mr. W. H. .. 470
Flower:—	<i>Chrysanthemums</i> , disbud-ding .. 458	<i>Fruit</i> at Norwich show .. 463	Notes of the Week:—	Miscellaneous:—
<i>Auricular</i> , border 456	<i>Chrysanthemums</i> , open-air, in December .. 458	<i>Grapes</i> at shows, staging .. 463	<i>Aralia</i> Sieboldi variegata in flower .. 469	<i>Birds</i> in gardens, usefulness .. 451
<i>Callistophus</i> hortensis .. 457	<i>Chrysanthemums</i> , undis-budded .. 458	<i>Grapes</i> in winter, keeping .. 463	<i>Begonia</i> semperdorens glauca .. 470	<i>of</i> 451
<i>Clematis</i> cirrhosa 457	<i>Chrysanthemums</i> , varieties of .. 458	<i>Pear</i> Aston Town 462	<i>Begonia</i> , basket 469	<i>"Matters of taste,"</i> fallacy .. 453
<i>Cowslip</i> , the double .. 457	Garden Flora:—	<i>Pear</i> Beurre Bosc 462	<i>Begonia</i> Papaya 470	<i>as to</i> 453
<i>Crimum</i> Powellii 457	<i>Kuiphoia</i> Tucki 458	<i>Pears</i> , capricious 463	<i>Chrysanthemum</i> Chatsworth .. 469	<i>Robin Hood House, Gl. Birk-hamsted</i> .. 453
<i>Dahlia</i> in November .. 457	<i>Torch</i> Lilies 458	<i>Pears</i> , late 461	<i>Chrysanthemum</i> R. Hooper .. 469	<i>Veronica</i> La Seduisante .. 459
<i>Flower</i> garden notes .. 456		<i>Root</i> -pruning 464	<i>Pearson</i> 470	<i>Violets</i> , exhibiting .. 455
<i>Gladiolus</i> bulbs, keeping .. 457		<i>Walls</i> , stone v. brick .. 463	<i>Chrysanthemums</i> Snowdrop and Primrose League .. 469	<i>Weather</i> , the, in W. Herts .. 470
		Trees and Shrubs:—		
		<i>Abutilon</i> varicarium .. 465		

FERNS.

SUNLIGHT FOR FERNS.

I QUITE agree with the remarks of "C. H." (THE GARDEN, p. 424) with regard to the advantages of exposing Ferns to all the sunlight possible. I have often advocated the necessity of more light and less shading for Ferns. There are some which delight in a more shady position than others. I find most of the Aspleniums do not do so well when fully exposed to the direct rays of the sun, but even for these light is essential. The Davallias do well if fully exposed during the winter, but when the sun gets more powerful some shading is advantageous. It may be taken generally that those which show no coloured tints in the young fronds like more shade than those which have the bright rosy tints, though this is not absolute. The Nephrolepis, for instance, never develop the rosy tints, but when well exposed they have a lighter and more pleasing shade of green, and may be grown in the most exposed positions, and, provided the watering is carefully attended to, will make more satisfactory growth than when subject to heavy shading. The Adiantums are the most remarkable. Considering the fragile nature of the fronds, they withstand full exposure to the sun where others with fronds of greater substance suffer. I would, however, call attention to the fact that those who have been growing Ferns under heavy shading must not expose them until they have been gradually inured to the new treatment. Taking A. Farleyense as an instance, I have seen plants which have been grown in a high temperature, with thick shading and plenty of moisture, which have made fine deep green fronds. To expose such would mean that either a dry atmosphere or a very little sunshine would shrivel the fronds up, but start young plants and grow them on under drier and more exposed conditions, and there will be little risk of them suffering from sunshine if watering is not neglected. All Ferns when

exposed require more attention, but over-watering should always be avoided. The same mistake is often made with regard to watering as with shading—that is, it is overdone. Where the pots are well filled with roots and the plants have good healthy fronds they will take up a considerable quantity of water, but with those that have not much top or have been repotted great care should be taken not to get them too wet, for if the soil gets soddened and sour they will never make satisfactory growth. When repotting, if the balls are fairly moist and the soil in good condition, only a slight surface watering should be given. Except when placed in a very dry position this will be sufficient for several days. It will be better to err on the side of keeping them a little too dry than otherwise, provided the fronds do not get withered beyond revival. A. HEMSLEY.

BASKET FERNS.

It is hardly the proper time to disturb any plants at the roots, but where a little extra warmth can be given there is no better time for filling baskets which are to be suspended from the roof, as they will get the full benefit of the light and there is no danger of the sun being too powerful, while there will be sufficient time for the plants to get well established and hardened before the sun gets too strong. The Nephrolepis, Davallias, &c., are the most suitable for baskets, but there are many others which may be recommended. In filling the baskets, young, free growing plants should be selected and only a thin layer of Moss should be used, for if too much space is taken up with it it will decay and leave a space, and the soil will get loose. For covering the under surface of the baskets there is no better material than Ficus repens. If a few young plants of this are put round the edge and pegged down they will soon form a good covering, and will help to keep the soil together without taking much nourishment from the Ferns. Some of the Davallias will in time cover the baskets, but most Ferns are slow to cover the under surface, and the Ficus can always be thinned out or removed altogether after the Ferns get well established.

In some cases two or three varieties may be grown in the same basket, but for the fernery I like to keep each sort separate, using baskets in sizes to suit the growth of the Ferns. Large baskets are generally objectionable on account of being too heavy, but such Ferns as Stenochlona scandens, Nephrolepis ensifolia, N. davallioides, Davallia ornata, &c., can only be seen to advantage when grown in large baskets. The most popular basket Fern is Nephrolepis exaltata. This is now recognised as one of the best market Ferns, and is used extensively both in pots and baskets. This Fern also finds much favour in America, where it is generally known as the Boston Fern. A. H.

SELAGINELLAS FOR MARKET.

FEW of the Selaginellas prove of much value for market. S. Kraussiana (more generally known as denticulata) is grown extensively. The demand is, perhaps, a little uncertain, but sometimes it is wanted in very large quantities. Well-grown stuff will generally pay fairly well. There are various methods of treatment. I like to get short, fresh material to start with. Where stock is plentiful, about four or five good patches may be put into a 4½-inch pot, and if done well it gives little trouble, and may be well exposed to the light from the start. Almost any soil may be used, but a fairly rich, open compost will be found to suit it best. To do Selaginella well it must be exposed to the light. It is a mistake to suppose it can be grown under the shade of other plants. With sufficient moisture it may be grown fully exposed to the sun, and will make short, compact growth and keep its colour well. S. Martensi, the erect-growing variety, finds some favour, but could not be sold in quantity like the above, though when well grown it is very serviceable for decoration. S. Emiliania makes a very pretty and useful plant either in a small state or grown on in a 4½-inch pot. It should be propagated from small cuttings and grown on singly. The cuttings are slow in making a start, but after the crown of the plant is formed they soon get away, making symmetrical, compact little plants. S. amena may be recommended as one of the most useful. Like the last named, it is rather slow in making a start, the cuttings

taking some time to form roots, but when once it gets a start it grows freely. The deep green, feather-like fronds or growths are of a peculiar wiry substance, and it is one of the best to stand exposure. These last two may be propagated by putting small cuttings into pans or boxes and potting singly after they are established. A loose, open compost should be used. If grown on in a stove temperature they will make more rapid progress, but before taking them out for use they should be hardened off, and although they luxuriate in a moist atmosphere, they stand well in a drier air if not subjected to a sudden change.

The Selaginellas are most serviceable for edging groups and filling up under coloured foliage. Some are also used extensively for cut-flower work.

A. H.

NOTES ON HARDY FERNS.

In gardens otherwise well managed we often see corners adjacent to buildings and with cold aspects filled up with rubbish and generally the most untidy part of the place. This need not be, for in addition to the flowering plants that delight in shady, cool positions, we have in the hardy Ferns the means of making such corners charming all the year round. Enthusiasts in hardy Fern culture often say that no flowering plants should be associated with them, but this I hardly agree with—at any rate, when deciduous as well as evergreen species are included in the collection. Such pretty effects may be produced by the use of such things as the hardy Vincas and Squills, Anemones and Primroses, that to leave them out of such arrangements is to rob them of half their brightness and beauty, and being mostly of dwarf habit, they do not in the least detract from the soft green tints of the young fronds of the *Polystichum* and similar deciduous Ferns. Dealers in hardy Ferns now catalogue an immense number of forms of the commoner species, such as *Polypodium vulgare*, and there are few more beautiful among exotic kinds than some of these. The Welsh *Polypody*, for instance, that used at one time to grow in large numbers, notably about Wentwood, in Monmouthshire, is one of the prettiest, and even the common type is very beautiful, especially in early spring and in late autumn, when the fronds are ripe and the older ones taking on the old gold tint characteristic of them. This is very fine in some of the red sandstone districts in Gloucestershire. Then the Hard Fern (*Blechnum Spicant*) in some forms is exceedingly beautiful, and I have gathered wild forms of it in South Wales as finely cut and long in the frond as a *Nephrolepis*. The hardy and ubiquitous *Asplenium Adiantum-nigrum*, again, has many forms, so have the *Athyriums*, to say nothing of the large number of beautiful species that have come to us from North America and Japan.

There is no lack of material, then, for beautifying the places mentioned, and the form and manner of planting will depend somewhat upon individual taste. Where abundance of large stones of a rough and jagged kind, or any with a natural appearance can be had, something in the nature of rockwork is usually attempted. On the one hand, this does not need to be made flat and regular; on the other, there is no need of making it bristle with rough stone. A stone in a hilly country often shows a round surface, sometimes quite a level one, while in slaty districts or where pennant and sandstone are found there are flat beds one over the other. Such fearful and wonderful arrangements as the common or garden rockery with sharp points sticking up at every foot or so are seldom, I should say, seen in a state of nature. In planting it is

a mistake to be dotting the plants about all over it at stated heights and intervals. If a good large clump of the Royal Fern can be had, let this be placed in a bold and prominent position; also large clumps of such as the Soft Shield Fern, and let the dwarfier kinds have to be looked for, as it were. If an old log with *Polypodium* already established upon it can be obtained, this may be used as a place whereon to establish others such as like a clinging position more than to be planted in soil. I have seen the wild *Hymenophyllum* thrive well in this way as well as the Black Spleenwort that is so much at home in old masonry everywhere. But wood, as a rule, is not a good material for the purpose indicated. It soon decays and looks untidy, and there is never the same thrift in delicate species of Ferns as there is when their roots can lay hold of stones. But in localities where stone cannot be had one must perforce be satisfied with wood for the purpose.

GROWER.

FERNS FOR DECORATING ROOMS.

MANY of these most beautiful in themselves are of but little value for house decoration. To have them suitable for this purpose the fronds must be green, yet so hardy as not to be affected by the cold draughts from open windows. We too often see during the winter the frosty air blowing in on plants as they stand on tables near the windows, and if such are at all tender their foliage is soon cut down. Amongst Ferns there are but few more useful for this work than the *Pteris* family. Their fronds are hardy, and at the same time many of the species are most pleasing. If we take *P. tremula* we shall find that more of this variety finds its way to the market than any other. It is alike useful in a young and small state as well as when grown to a goodly size. This species stands well in a room, particularly if not too much pot-bound to need frequent watering, as plants in such places are apt to get dry, particularly during the summer months. In small pots this plant is most useful, for when well grown it can be employed for a variety of purposes, and being of such free habit it makes, in a 5-inch or 6-inch pot, a nice specimen well furnished with its noble fronds. Seedlings are so easily raised, that a good stock may be worked up in a short time. It is not at all particular as to soil, but a light, rich sandy loam seems to suit it best. Thousands of plants of *Pteris serrulata* are sold daily in our markets, thus testifying to its popularity for decoration. Its hardy constitution, easy cultivation and graceful habit at once place it in the front of our decorative Ferns. Either in small pots or when grown to a larger size it is alike useful, as its light graceful fronds lend themselves to almost any place, and being of such a lasting nature do not soon suffer when exposed to cold winds or allowed to get dry. The freedom with which this variety is produced from spores and the rapidity of its growth enable it to be used more often than could otherwise be done were it more tender. It enjoys a liberal amount of water and should not be exposed to the scorching rays of the sun during summer, otherwise the fronds are not of that freshness so desirable. There are several varieties of this all more or less beautiful. *P. s. gracilis*, *P. s. cristata*, *P. s. Lysi* and *P. s. tenuifolia* are amongst the most graceful, and may be used according to the tastes of the decorator. *Pteris cretica* is deservedly one of the most popular greenhouse species for decoration, particularly the variety known as *albolineata*, the bright line down the centre making it very attractive, particularly when the fertile fronds are removed. *P. c. Mayi* is also a beautiful form of the above, being of dwarfier habit. This comes quite true from spores and grows very readily. *Lomaria gibba* in a young state is very attractive, and thousands are used every year for table and other decorations. Grown in small pots they are most useful, and may be employed for a

variety of purposes; their light, Palm like fronds which grow so close to the pot enable them to be used in places where it is difficult to have Palms. The soft green and compact habit, together with the enduring nature of the fronds, renders them most useful. When grown in a 6-inch pot the plants are very useful for vases, but they must on no account be allowed to get dry at the root or they soon suffer. *Lygodium japonicum* is usually grown in gardens under the name of *Lygodium scandens*. For decoration it is most useful, for its slender climbing stems may be employed in a variety of ways. When grown in small pots the growths can be trained round pier glasses and like places. They are also useful for table decoration and for hanging baskets. The fronds are very leathery and stand a long time in water, which is a great advantage. At one time no Ferns were so much in request for decoration as *Adiantums*. Either cut or in pots there was always a demand for them, but since the *Asparagus* has become so popular there is not the same call for *Adiantums*. Still, as pot plants, particularly in a small state, they are much in request, and thousands are sold daily in our markets. Being of such easy culture and accommodating themselves to all sorts of places, they are sure to remain in favour so long as there is such a rage for small plants. When well grown they make nice subjects for decorating rooms, but they must on no account be allowed to get dry at the roots or be stood in the draught, or the fronds will soon shrivel up. Fine specimens may be grown in the course of a few months, particularly if well fed with manure water. As to soil, they are not at all particular so long as it is of a light, sandy nature. *A. cuneatum* should not be grown in too much heat, neither ought the plants to have a dense shade, or the foliage will be of very little use for cutting. *A. gracillimum* ought to be grown fully exposed to the sun to make the fronds hardy if they are to be of any value. All the species are more or less valuable for decoration, though none are so popular as the above.

H. C. P.

KITCHEN GARDEN.

QUALITY IN BRUSSELS SPROUTS.

PROBABLY no winter green vegetable causes more disappointment than Brussels Sprouts. The chief annoyance is their growing out into what may be termed miniature Cabbages instead of young, medium-sized, hard nuts. Errors in cultivation are generally responsible for this state of things, and I am convinced the majority of batches are sown too early. I never could see the force of sowing Brussels Sprouts say in January, or even early in February, as some do. Even in midland and northern gardens the practice is unprofitable, as more often than not the seedlings remain in the seed-boxes until they become yellow and stunted, as the weather is more often than not too inclement for exposing them in open quarters. When residing in South Notts I once or twice grew an extra early lot of this vegetable, sowing the seed in a Carrot frame in February and finally transplanting early in April. Even on not over-rich ground the sprouts invariably reached maturity early in October, at which date they are seldom asked for in the dining-room. By the time this was the case, a large percentage of them had burst or had lost quality, secondary March open border sowings having to be started on. If these extra early sprouts must be grown more than ordinary care must be taken all round. In the first place, sorts noted for their medium stature and close sprouting habit should be selected, and instead of being crowded in seed box or pan should be thinned out as soon as practicable and pricked into other pans, boxes, or frame mounted on a gentle warm bed immediately the first pair of

rough leaves are formed. In the frame they can be left until the weather allows of their final transplanting being accomplished without suffering, and can, provided crowding is avoided, a somewhat holding soil employed, and exposure by entire removal of lights when fine practised, be lifted with a trowel. These early batches should also have a very firm, rather poor root-run, also a sunny, open position and ample room.

In the case of main winter plots, the season affects them more or less. In wet, sunless summers abnormally large, loose sprouts are the rule, this defect being observable even at shows. Good all-round crops would be made more certain were the young plants treated as many treat winter and spring Broccoli, viz., planting on land free from fresh manure and which has not been turned up for some time. Where practicable, the plot from which this season's crop of spring Onions was taken might be set aside for Brussels Sprouts during the following year, not interfering in any way with the surface beyond cleaning with hoe and rake and drawing slight drills to plant in. Onions being, as a rule, well provided for, the ground would be quite rich enough for sprouts, and the firm condition, while encouraging hard fibrous roots, would likewise retain moisture better and have the additional advantage of a more even temperature, conditions essential for the production of good stocky stems in such a variable climate as ours. NORFOLK.

Beet.—Although generally on ordinary soils Beet is not this season so large as usual, yet I have seen on rich ground plenty of roots full large: indeed, in such ground, although gardeners constantly complain of the effects of drought, yet the crop seems to have been as sturdy and good as at any time. Such are the common results of deep culture and ample manuring. But if we have less large Beets generally, there is plenty of nice sized, fairly clean roots, but many are rather rugged in outline because the soil had been so hard baked. Tops, too, generally have been dwarf. I found in my own trial of Beet that Dell's Crimson, Nutting's Dwarf Red, Cheltenham Green-top, Ash Grove, Sutton's Blood Red, Carter's Perfection, Webb's Satisfaction, and others of the very best garden Beets were very much alike in top-growth, although in ordinary seasons differences in robustness are very apparent. It has not been a fair season to test Beets.—A. D.

Large Onions.—The fine Onions exhibited at a recent Drill Hall meeting from Leicester show that the culture of large bulbs is not only widely understood, but is as widely practised. There are few gardens of any pretensions now in which it is not the rule to raise Onions under glass and plant them out in the spring. Although in the Leicester collection that popular Onion Ailsa Craig figured as Leicester Globe, yet the multiplication of names does not affect its popularity, and it remains yet the very best large solid Onion in cultivation. Intending growers not already supplied should get their seeds at once. The best growers sow usually about Christmas: some rather earlier, some later, but it is a good time to sow the seed. A moderate temperature suffices, as growth is stouter in consequence than is the product of much warmth. Plenty of air and light and just kept growing on, pricking out into shallow boxes thinly when the seedlings are from 2 inches to 3 inches in height, enable very strong, sturdy plants to be ready to plant out in April.—A.

Vegetable refuse for Peas.—I am pleased to know that "H. R." has found amusement in my article on the above subject in a recent issue of THE GARDEN. I did not advise Pea growers to use vegetable refuse in preference to manure; as a fact, in the opening sentences of my remarks I expressed surprise that such fine crops could be

grown without the use of manure. Neither did I assert that the decayed matter from one year's crop dug in would be sufficient nourishment for next year's crops. Does your correspondent seriously imagine that any English gardener would make such a ridiculous statement? I distinctly stated that the good results were obtained by means of heavy dressings of leaves, lawn sweepings and such material which had been kept a year and had been sweetened by being repeatedly turned over. I did not say that vegetable refuse should be buried and manure kept on the surface. My remarks were descriptive and suggestive. I described the way in which fine crops of Peas were grown with the aid of vegetable matter alone, also the way in which a large grower uses manure, suggesting that in this manner young growing crops are likely to be better fed than when the manure is dug in in lumps. I would advise "H. R." to read more carefully that which he desires to criticise.—J. C., *Byfleet*.

Turnip-rooted v. long-rooted Beets.—I am now using an excellent selection of Blood Red Beet, and besides its very handsome appearance in the garden I am constantly hearing of its excellence both from the kitchen and the dining-room. This season my earliest sowings, which are always of one of the Turnip-rooted varieties, did badly, and in consequence I had to use the long-rooted kind before it was half grown, but even then it was excellent and the colour remarkably good. I am not going to run the Turnip-rooted section down, as I have found it useful early in the season, but at the same time Turnip-rooted Beets do not in the majority of cases come up to the other section for quality, and I am inclined to think that, as a rule, we grow too many of them. For the first crop sown either under glass or in warm borders the Turnip-rooted Beet is useful, and though I grew for several years a Globe variety for late summer and autumn use, I have discarded it the last two seasons, growing only the Blood Red for all but the earliest supplies. I feel confident it was a change for the better, though doubtless in some very poor and shallow soils there is room for the shorter roots. It is a case perhaps of growing what suits the soil in individual cases.—H. R.

Asparagus.—Whilst in large gardens Asparagus is usually well grown, in many small gardens it is too rarely seen in good condition. Generally the old method prevails of planting in beds which in the course of a few years under the heavy soiling conditions so common with the bed system elevates the crowns so high, that not only do they soon suffer from drought, but the roots at the sides get cut off hard by the spade in trimming down the sides, are exposed to the air and debarred from extending into the adjoining soil. Very seldom do we see a good breadth planted on the flat, which is much the best, especially where the soil has been deeply worked and well manured prior to planting. Where the sub-soil is of a poor, gravelly nature, it is well to throw out several inches of it from the bottom of each trench as the deep working proceeds, replacing it with fresh good soil and the contents of a heap of well-decayed garden refuse, if such be at disposal. Preparing ground well for Asparagus, a crop that it is intended to leave for many years, is amply repaid later when, with years, growth becomes very strong, as then the weight of the produce is greatly enhanced. The sowing of the seed, raising the plants, and thinning them fairly hard to enable yearlings to become strong enough to plant out for permanent purposes give as little trouble as is needful for Cabbages or other crops.—A. D.

The Potato crop.—A statistician has recently declared that fewer Potatoes are now being consumed than was the case a few years ago. Statistics may be made to prove anything desired, but in this case the assumption is that the public taste is being directed from Potatoes on to other foods. That is an assumption which may be taken for what it is worth. But it is certain that some recent dry seasons have materially affected the productiveness of the Potato plant, and such re-

sult has been seen in the past summer to an unusual degree. We have this year one of the shortest of crops generally, relative to area planted, entirely the product of a most adverse season, yet with very little disease. In such case it can be no matter for surprise if Potato consumption is materially restricted, as already prices rule high compared with those seen in ordinary years at this season. Unless there are large importations, or the crop in the north is exceptionally good, we may expect to find prices very high in the spring. Vast quantities of Potatoes are grown in gardens, especially in cottage gardens and on allotments, that never come into ordinary agricultural returns. But when the crops on these areas are represented, as has been frequently the case this year, with produce of but one-half or one-third of the average bulk, no wonder if the demand for Potatoes on sale is enhanced and high prices follow. Last spring-planted Potatoes suffered as much from prolonged cold and numerous late frosts as from any cause, and the great drought which followed made matters so much the worse. With respect to Potato consumption, it is certain that early spring importations of unripe tubers whilst consumed are vicious food, yet they do increase greatly. At home, in the production of early crops we are handicapped not by lack of proper varieties, or soil, or want of knowledge, but by late, cold springs, which defy all efforts to overcome.—A. D.

NOTES ON TOMATOES.

— I do not think any Tomato superior to Conference for flavour and good cropping. It is a most reliable fruiter, never fails to set well, and the flavour is excellent. I am aware there are larger fruits, but mere size does not denote quality, and even in the market there is now a better demand for a Tomato the size of Conference than larger fruits. As regards flavour and crop, Ham Green runs Conference closely, but it is longer in ripening. Many exhibitors would put a good selection of the Perfection Tomato before any other, but I do not think it superior in any way, and at times it is too large, but the quality is good when the fruits are medium-sized. There are so many varieties of Tomatoes under cultivation that in the notes sent there will doubtless be great diversity of opinion. Some growers have their own selections, and some I have seen are in many cases superior to kinds in commerce. The best outdoor kind I have tried is Laxton's Earliest, an excellent Tomato. This ripens in July, and is of good quality. Earliest of All is also a very good outdoor variety, having fruits of medium size, good colour, and produced in quantity. Ladybird and Frogmore Selected I have found very good grown thus. To these should be added Golden Jubilee, one of the best of the yellow section. This is also good as regards crop and quality, and is a beautiful fruit. In the new kinds of late years, some of the small dessert (or so-called dessert) kinds are good for salads. The best kind for winter and early spring crops is a selection from the Old Red, as I find a corrugated fruit sets best in winter or autumn. Horsford's Prelude is an excellent winter Tomato, but too small. Ladybird, Conqueror, and Conference are excellent for this purpose. I consider the Tomato a vegetable.—G. WYTHES, *Syon Gardens, Brentford*.

— I have tried a good many Tomatoes, but have found none to beat one called The Cropper. Inside and out I have it this year and have never seen a better for setting. It is far before others that I have tried and does well for early and late work. I consider the Tomato a vegetable.—C. TERRY, *Blaston Hall, Uppingham*.

— I think Polegate is one of the best Tomatoes for general purposes. I find it free setting, of good flavour, large and fine for exhibition. I know of no Tomato more suitable for outdoor culture than Earliest of All. Some of the fruits are corrugated, but this is a minor fault when we consider what an abundant cropper it is. It is dwarf, short-jointed and fruits early from the base

of the plant. Perfection and Ham Green Favourite are good kinds for early and late forcing. Frogmore Selected and Earliest of All are also suitable kinds for the same purpose. I consider the Tomato a vegetable.—J. LEWIS, *The Gardens, Swanmore Park, Bishop's Waltham*.

—Hathaway's Excelsior and Perfection are the best. Wheeler's Prolific and Maincrop are the best for outdoors and for autumn and spring. Earliest of All is, I find, the best. The Tomato is used here more as a vegetable than a fruit, and I consider it as such.—JORDAN BLAYNEY, *Huntley Manor, Gloucester*.

—For good flavoured and free setting Tomatoes, with an even and good appearance, I consider Ham Green Favourite, Royal Chester, Perfection and Frogmore Selected as good as any. Polegate does as well as any for outdoor work about here, but as the season is short and uncertain not many are grown, and therefore few varieties have been tried. For winter and early work I have had nothing to surpass Early Ruby, which is a good cropper and generally turns out satisfactory. I have no hesitation in classing the Tomato as a vegetable, although sometimes it may be eaten as a fruit, yet considering the many uses to which it is put in the kitchen, I certainly think it is more in its right place in a collection of vegetables than classed among such as Grapes, Melons, &c.—E. GILMAN, *Alton Towers*.

—The best Tomatoes are Eclipse, Frogmore Selected and Early Chemin. Chemin I find the best for autumn and spring work. I consider the Tomato should be classed as a vegetable.—JOHN CAIRNS, *The Hirsch Gardens, Coldstream, N.B.*

—The only two varieties of Tomatoes I grow are Early Ruby and Ladybird. I find they do well here under glass and out on the open wall and always set a good crop. Winter Beauty is a splendid Tomato. I consider the Tomato a fruit.—JAMES COOMBS, *Englefield Gardens, Reading*.

—There are so many so-called new varieties at the present time before the public that it is difficult, I find, to secure a really true stock, or define which is the best. Undoubtedly it is an easy matter to secure a strain producing more even fruit than was possible twenty years ago, but still some of those which fail to find favour because they may be slightly ridged or uneven in outline cannot be beaten for producing heavy crops. During the past three years I have found Frogmore Prolific very satisfactory in every way and have grown it in place of older ones, but having a true stock of Ham Green Favourite, I retain it for its general good qualities. A market grower in this district who grows Tomatoes most successfully and in great quantities informs me that he relies on two varieties only, viz., Chemin Rouge for early spring supplies and Challenger for the main crops. From seeing them growing in his establishment I can thoroughly recommend both varieties. In common with many other gardeners, my experience with Tomatoes commenced long before they had become so popular, a dozen or so plants placed in odd positions against a warm wall being considered more than sufficient to meet the requirements of a large establishment when no one dreamt of considering them anything else but a vegetable. Because the public have acquired a taste for them, and in many instances followed a fashion of eating them raw, does not in any way convince me that they should be classed as a fruit and worthy of a place on the dessert table. I have never yet risked using them for that purpose, and I have an idea that even those who would have us believe that Tomatoes are worthy of such distinction would invariably discard them if they had the choice of Grapes, Peaches, Strawberries, or, indeed, any of our choice fruit. My contention is that a Tomato is as much a vegetable as a Potato.—R. PARKER, *Goodwood, Chichester*.

—Ham Green Favourite, Perfection, Jubilee, The Polegate, Duke of York (not quite free enough), Golden Jubilee (yellow), and Prince of Wales (yellow) are, I consider, the best. Laxton's Open Air and Magnum Bonum are the best for

outdoors, and for winter work the best I ever saw was a selection from the Old Red, as grown and selected by a friend that grows largely for the London market. For early work, Early Ruby, I think, is the best. The Tomato should be classed as a vegetable. For flavour I consider the old Vick's Criterion as good as any.—A. J. MORRIS, *Kingston House Gardens, near Abingdon*.

—Tomatoes are only grown outside. Ham Green and Frogmore Selected give very heavy crops of fine fruits, and are the only ones I rely upon. I have tried many others, but none are so satisfactory as the above. If confined to one variety I should grow Frogmore Selected. I consider the Tomato a vegetable.—WM. CANNIE, *Battle Abbey, Sussex*.

—The Tomato I would recommend for early and main-crop is Hathaway's Excelsior. I have grown it for many years. None of the newer ones excel it here. I have it in fruit mostly all the year round. I have seen the Tomato shown in a collection of fruit, but I consider it misplaced there. It is a vegetable, and should always be shown as such.—M. MCINTYRE, *The Glen, Innerleithen*.

—I knew of no kinds of Tomatoes that are better for setting and flavour than Ham Green, Chemin, and Perfection. For outside Magnum Bonum is a heavy cropper, but I like the above varieties best. For winter and early spring use Chemin and Ham Green are not easily beaten. Ruby is early, but of a bad shape. I consider the Tomato should be classed with what it is grown and used for, viz., a salad or vegetable. I consider anyone exhibiting Tomatoes in a collection of fruit for dessert should be disqualified. Very few people would care to eat Tomatoes like one would a Peach or Pear, mostly preferring them cooked or cut up as a salad.—J. HILL, *Babraham, Cambridge*.

—I consider Best of All the finest for freedom of setting and flavour. The best outdoor kind is Magnum Bonum. Grown in a small house with other varieties, I have found Best of All set fruit near the bottom and ripen quicker than any other I have tried for early spring use. I consider the Tomato a vegetable.—J. HOAD, *Colworth Gardens, Sharnbrook, Beds*.

—I like Challenger, Early Ruby, Neild's Seedling, and Cheshire Favourite, but for larger fruits and midseason work Perfection, Oxonian, and Duke of York are the best. Perfection and Oxonian I had last year 14 ozs. and 12 ozs., and Duke of York I had 1½ lbs. Ham Green, Challenger, Neild's Seedling are the best outdoors, but for this district I usually grow the plants inside in 6-inch pots, and when there are a few trusses of fruit set by the second week in June they are planted out, and with attention and a genial summer I get some good fruit. Challenger, Neild's Seedling, and Early Ruby I have usually grown for autumn and spring, but this year Oxonian set its first fruit before the previously mentioned ones. The Tomato is certainly a fruit, but can be used either as a fruit or as a vegetable. I know at some shows it is a vexed question, but the difficulty is soon made plain by arranging the schedule accordingly.—JAS. DALY, *Wythenshawe, Northenden*.

—I consider Polegate the best flavoured Tomato, and Frogmore Selected the best outdoor variety, and I also believe it to be the best all-round variety for winter and spring. It sets very freely, and always has given me the greatest satisfaction in point of flavour. The crops of this variety have been wonderful on the walls outside, taking into account our damp climate here. I consider the Tomato a vegetable.—W. A. BOWLES, *Adare Manor Gardens, Limerick*.

—The Tomatoes I have grown and find free-setting and of fine flavour are Best of All, Ham Green Favourite, Princess of Wales, Frogmore Selected, Perfection, Hackwood Park, Early Ruby and The Polegate. The above kinds have all been grown inside and out. I think Hackwood Park, Best of All, and Perfection would be hard to beat for outside work. I find Best of All, Early Ruby, and Hackwood Park three good kinds for winter

and spring crops. Though considered by most people to be a vegetable, in my opinion the Tomato is a fruit.—C. E. MUNDAY, *Nuneham Park Gardens, Abingdon*.

—I consider Eclipse the best all-round Tomato indoors. Eclipse is also the best for autumn and early spring. The Tomato is a fruit, but not a dessert fruit. At shows in a collection of vegetables a dish of Tomatoes stands high with the judges, but no competitor would risk his chance of a prize in a collection of fruit by staging a dish of Tomatoes.—A. CROSBIE, *Buchanan Castle, Drymen, N.B.*

—Our best Tomatoes are Earliest of All, Sutton's Dessert, Perfection, Comet, Conference, and Eclipse. The variety I have found most suitable for early work is Earliest of All. I consider the Tomato a fruit, but one that is used principally as a vegetable.—THOS. WILSON, *Glamis Castle Gardens, Glamis, N.B.*

—I find Ham Green, Chemin and Ladybird the best all-round Tomatoes, with the addition of Conference for outdoors and Early Ruby for winter work. A good type of Perfection is the best for exhibition, but it does not give the same weight of fruit as the varieties already mentioned. Cherry Yellow is a decided acquisition for the dessert and very much appreciated here. The Tomato is decidedly a fruit, and certain varieties are dessert fruits.—BEN. CAMPBELL, *Kingston Gardens, Dorchester*.

—The three most useful Tomatoes that I have yet tried I consider are Challenger Improved, Perfection, and Ham Green Favourite. I cultivate them both in the open and under glass, and find them of a most serviceable size, good in flavour, and excellent croppers, and should I be tied to grow one variety it would be the first mentioned. Cannell's King is too large for general purposes, most people preferring fruits of a medium size. Of the yellow-fruited varieties I prefer Golden Jubilee to any I have yet tested. During the last three seasons I have had excellent results from thirty or forty plants, consisting of the above varieties, out in the open air, grown against a wire trellis facing nearly due south, and planted solely in coal ashes with a little stable manure added, doing equal to those in prepared beds. The stems at the end of summer had the appearance of ropes of fruit, with clusters averaging from six to twelve on each. I should describe the Tomato as a fruit, but most generally utilised in the way of a vegetable, either raw or in a cooked state.—W. SILCOCK, *Hollycombe Gardens, Liphook*.

Tomato Stirling Castle.—One is apt to tire of new Tomatoes, as, like Potatoes, they multiply so quickly, and many of the so-called new kinds are no improvement on older ones. Still, a really good all-round variety is sure to find patrons, as few now confine themselves exclusively to one sort. A few days ago I called on a gardening friend and was shown into a small lean-to house, not a good one for Tomato growing. The Tomatoes, which were in pots, were trained up the back wall. There were two varieties, but the one which struck me most was Stirling Castle. A nice crop hung on the top of the plants, the fruit being of exceptionally fine shape and colour. Stirling Castle is, I believe, better known over the border than in England.—GROWER.

Potato Carter's Snowball.—This is undoubtedly an excellent Potato, of good quality and a splendid cropper, well suited to heavy soils; consequently it should become a standard variety for field crops. The first time I grew it I rather disappointed me, as from some cause or other the increase was but small. This was in a very sandy soil that had been cropped with Potatoes for many years, and the season was a remarkably dry one. As I had seen good accounts of it as a cropper and was aware of its excellent quality, I determined to try it again, this time on heavy soil not long in cultivation, and the result far more than justifies the resolve, for the crop turned out was quite a remarkable one, though Potatoes generally throughout the neighbourhood were a very poor crop indeed, Magnum Bonum hardly paying for the seed.—J. C. T.

THE FALLACY AS TO "MATTERS OF TASTE."

THE man behind the counter often tells us that "it is a matter of taste" if we say a word as to the ugliness of some of his wares, and many other people have the same false idea that obscures all issues about artistic things. If it were confined to the ignorant it would do little harm, but we hear it expressed by men of education. To take a recent instance, the author of "Pages from a Private Diary" (1898) protests against

making a religion of what is purely a matter of taste. Weeds are as natural as flowers. A lawn left to Nature would soon become a meadow. A hedge left to Nature would become monstrous and useless, because pervasive. A well-grown Yew tree is undoubtedly a beautiful object, but a Yew clipped intelligently is quite as beautiful; and if a tree will clip, it is not unnatural to clip it.

Here we have some common ideas written by a man of wit, but who in this instance

So far from its being true that good or bad garden design or planting are merely matters of taste, the very first thing we should teach to everyone who has to think of it is that they are matters of fact, truth and observation. The assumption in the paragraph that anyone advised leaving hedges, &c., to Nature does not surely need a reply; but that a Yew clipped intelligently is quite as beautiful "as a well and naturally grown Yew tree" is a statement that could hardly be made save in jest by anyone who has thought the least about tree beauty or natural form of any kind. For here it is not a difference of degree we have to deal with, but a difference in kind, because a clipped tree is a thing without any true form, light or shade, motion or voice. Vast as are the differences above named, between none of them is there so great and hideous a difference as between the divinely given form of the northern evergreen tree, whether of the tree-fringed mountain lawns of Jura, the mountains of the Pacific

WRITING WITHOUT KNOWLEDGE, which, unhappily, is devoted to it. To practise an art without any knowledge of it is bad enough, but when men *write* about art dealing with so many living things as planting, when clearly they have given no heed to its simplest elements, they do infinite harm in spreading the false idea that it is all "a matter of taste." Of such quotations as the above, in which every phrase is an error or a false assumption, a volume might easily be put together.

One of the commonest and grossest errors is to take the worst possible work, abuse it, and say nothing about the better way.

Deception is a primary object of the landscape gardener. Thus to get variety, and to deceive the eye into supposing that the garden is larger than it is, the paths are to wind about in all directions and the lawns are not to be left a broad expanse, but dotted about with Pampas Grasses, foreign shrubs, or anything else that will break up the surface. As was said by a witty Frenchman, "Nothing is easier than to lay out an English garden; one has only to make one's gardener drunk and follow him about."—THE FORMAL GARDEN.

There is not a word said here of the plain fact that we may have true and artistic ways, as well as stupid ones, of forming paths and getting fine variety of surface by planting, without dotting lawns with Pampas Grass, or of the equally plain fact that we can make walks through lawn or wood or by river in lines of easiest gradation and most convenient access without going through any of the antics above described or in any way violating good sense. There is not a word in the above paragraph which is true of good work in landscape planting.

That bad and ignorant work is done we can no more deny than the existence of the barrel-organ or the Victorian villa, but a man must be blind to the truth who writes thus without knowledge, as there are innumerable instances in every county of picturesque planting without deception of any kind. The true work of the landscape gardener is wholly different; it is to study the natural forms of the ground and keep to the best of them; to have keen eyes for every charm of natural growth and to save it for the future beauty of the place; to know also all the trees of the northern world fitted to adorn it; to make a living picture, in fact—easy to those who have eyes and hearts for the work, but impossible otherwise.

Another like statement of the writer on clipping trees that wearies us by its absurd want of knowledge of Nature is this:—

A clipped Yew tree is as much a part of Nature—that is, subject to natural laws—as a forest Oak; but the landscapist, by appealing to associations which surround the personification of Nature, holds up the clipped Yew tree to obloquy as something against Nature. So far as that goes, it is no more unnatural to clip a Yew tree than to cut grass.

The answer is that we mow turf to walk upon; for the pleasure to the eye of short turf, or for the pleasure of walking on it in the hot days, or for the relief and repose it gives; for by cutting grass short we disfigure nothing, throw no naturally beautiful things into grotesque or ugly forms offensive to the



Robin Hood House, Great Berkhamsted. Engraved for THE GARDEN from a photograph sent by Mr. J. T. Newman.

has not thought of what he writes about; and if we find these notions in such men, how are we to blame the many who with fewer advantages have to study the question of garden design or planting? For this and all artistic questions are only "matters of taste" to those who have not thought of them. The merit of a portrait by Rembrandt and the first Academy daub is not a matter of taste, but of very serious fact. So also we may compare an Elizabethan house with one of the carpenter's Gothic of our century; the sculptures of the Parthenon with the statues in our squares; a symphony by Beethoven with the "Maiden's Prayer;" an English cottage garden, quite simple in plan and full of flowers in their natural forms, with the imitations of very bad carpets (vile in colour and without form) which we now see in French and German watering-places (mosaiculture)!

coast of North America, or the rocks of Scotland, and the ridiculous results of the distortion of forest trees by man.

Yet the fact that garden design or planting is a matter of knowledge of the natural forms, harmonies and colours of things does not mean that this writer or anyone is not to do what he pleases in his garden. But when he tells us that the judgment which enables us to distinguish a good picture from a bad one is to abandon us before the absurdities seen in our gardens, and too often marring the foregrounds of the home landscape of our country houses, he is leading all who trust him into error. Moreover, individual likes and dislikes are wholly separate from the problem of what is best in a given situation as to design and planting.

The question, like so many others, is made needlessly hard for the student by the

artist and all who care for true form. Moreover, short turf is *not* an artificial thing, as there are 10,000 natural lawns on the mountains of Europe, short and crisp as ever lawn was seen; set, too, with alpine flowers and guarded by outposts of stately mountain trees.

W. R.

ROSE GARDEN.

TOWN ROSES.

THE indiscriminate purchase of Roses by amateurs for planting in town gardens without any previous knowledge of the varieties most suitable for the purpose invariably ends in disappointment. Then, again, the soil in such gardens, except in very few instances, is not such as the roots of Roses take kindly to, the trees also often being seen occupying northern or sunless positions, under which conditions they only drag out a miserable existence. A lot of rank, unwholesome manure is sometimes dug in, which only makes matters worse, as in town gardens it cannot be got deep enough; consequently, the roots are practically embedded in it—a great evil to an unestablished tree, especially should the winter prove severe. I am aware it is sometimes difficult to procure loam the most suitable for Rose-growing in such localities, yet such should be the aim of the cultivator if only a spit deep is given, so that the roots have the advantage of a fair start. Where the plot intended for planting is vacant and can be turned up and exposed to the weather from the beginning of September to the middle of November, or for the matter of that a whole summer, so much the better. In cases where the staple is what may be termed of fair quality, the wisest course to pursue is to remove half the original and thoroughly incorporate a similar quantity of the new material recommended above. If farm-yard manure is added, let it be lowered out of the way of the roots for the present, as contact with it while as yet there are no new fibres to assimilate it does more harm than good. The position, of course, must be a sunny and as sheltered a one as possible, as cutting winds in spring play havoc with newly-planted bushes just making their first growth, and often permanently cripple the trees. This matter of aspect needs, I am sure from personal observation, to be pressed home to amateurs. Staking and mulching are two points of culture generally ignored by the majority of town planters, and a standard which sweeps to and fro with the wind through the winter cannot be expected to make either rapid or satisfactory headway when spring arrives.

When applying a mulch, however, fat spit manure should be avoided, horse droppings being much more suitable. This allows the water to escape if only, say, a couple of inches are applied, and protects the surface roots from parching winds in spring. Soaking the rooting medium with water during November is also bad practice unless the position is an extra dry one, when the moisture should be given previous to the last layer of soil being laid on. Amateurs, again, not infrequently prune hard the first March, regardless of the strength and general stamina of the tree. Judgment is necessary, the weaker trees needing more leniency in the use of the knife. Last, but by no means least, is selection. Many of the beautiful show and other Roses are altogether unsuitable for town planting. Constitution combined with free growing and flowering

qualities is the principal requirement of Roses for town and smoky localities.

The following dozen will, as a rule, be found to give satisfaction: Alfred Colomb, Docteur Andry, General Jacqueminot, J. Stuart Mill, Marie Baumann, Senateur Vaisse, Hippolyte Jamain, Jules Margottin, Victor Verdier (one of the most reliable town Roses in cultivation), Prince Camille de Rohan, John Hopper, and La France. EAST ANGLIAN.

ROSES FOR THE SHRUBBERY.

It is a common fallacy that one must resort to the single varieties if it is desired to mingle Roses with other flowering shrubs. I have a great partiality for single Roses. The exquisite *R. hispida*, illustrated in THE GARDEN of November 18, is one of the loveliest. There are other Roses of a more perpetual-flowering character than the singles and equally vigorous in growth that could be planted in shrubberies, and it occurred to me it might be of some usefulness to planters if a short list of such kinds were given. Of the list I shall give there are some few kinds that would need the support of a centre stake. I should not term such specimens exactly pillar Roses. I believe in allowing the plant plenty of freedom at the base, but an artificial support to the centre is advisable until the bush is able to do without it. What are known as summer Roses make the largest shrubs, with the exception of the newer varieties of *Rosa rugosa*. That the forms of *R. rugosa* are destined to become valuable cannot be doubted. We have varieties now that bear really handsome double flowers. Anyone may see such kinds by visiting the sunk Rose garden at Kew. I am not certain that these varieties can be seen elsewhere. It is to be hoped they will soon be put into commerce. A very fine variety (see GARDEN, October 7) of *R. rugosa* which M. Otto Froebel has obtained at Zurich has flowers resembling those of La France, so that there is no lack of good material if we relied solely upon the *rugosa* hybrids. The great point in their favour is their perpetual flowering character. When many flowering shrubs are devoid of blossom in autumn a shrubbery border would not necessarily be the dull thing it is at present if some of the following perpetual-flowering Roses were intermingled with the other subjects. The forms of *R. rugosa* will develop into bushes 6 feet to 8 feet high. Other perpetual Roses that would reach a height of 6 feet to 8 feet if grown as bushes are Longworth Rambler, Gloire de Dijon, Kaiserin Friedrich, Clio, Germaine Trochon, Margaret Dickson, Waltham Climber No. 1, Dr. Rouges, Rosette de la Legion d'Honneur, Fellenberg, Pink Rover, Marie Lavallée, Mme. Emile Dupuy, Mrs. Paul, Dawn and Ella Gordon.

Moderate pruning is of course advisable. If the plants are relieved of the old wood they will not need such mutilation as is thought advisable by so many people. Doubtless the quality of the flowers would suffer, and one might lose the first blossom by frost injuring the early growth, but I have found the second flowering none the worse. The chief aim should be to secure sound, well-ripened wood. This can be better accomplished by allowing the plants plenty of freedom. Of the varieties that would make fine individual specimens from 4 feet to 6 feet high, I would recommend Mme. Abel Chatenay, one of the loveliest Roses in existence; Caroline Testout, Gustave Regis, Marie van Houtte, Grace Darling, Gruss au Teplitz, Souvenir de Wootton, Robert Duncan, Armosa, Mme. Isaac Pereire, Viscountess Folkestone, Mme. Lambert, Mme. L. Messimy, General Jacqueminot, Gloire des Rosomanes, H. Schultheis, Stanwell Perpetual, l'Idéal, W. A. Richardson and Mrs. Bosanquet. The late Mr. Girdlestone had great faith in *Rosa Polyantha* as a stock, especially to make large bushes. It is surprising what size many Roses assume when budded upon it. For the purpose in view I would strongly recommend it, the more so if the stocks are planted in the desired positions and there

budded. I do not care for the stock as a means of obtaining quality of blossom, but I have proved its value in developing some handsome bushes, especially of kinds not particularly good in this respect. PHILOMEL.

Rose Comtesse Festetics Hamilton.—Few Roses have been more interesting during the past autumn than the above-named variety. A basketful exhibited at the Crystal Palace fruit show came as a surprise to a great many who were unaware of the existence of such a lovely kind. I have been informed that abroad in countries like Egypt it is a magnificent Rose; indeed I think ere long it must become with us a general favourite. There is just that mixture of tints that appeals to every lover of Tea Roses. The ground colour is brilliant carmine, but there is a rich suffusion of coppery-salmon that immediately arrests attention even when one is surrounded by a host of other kinds. The style of flower resembles that of Ethel Brownlow when the latter has not been freely thinned. Ethel Brownlow, if allowed to grow freely, produces plenty of blossoms, but of only intermediate size, and one can hardly believe that the magnificent specimens now and then seen at the Rose shows are of the same variety. So I believe it will be with the variety under notice. I would rather have a Rose that gave plenty of moderately-sized flowers than merely one or two specimens however magnificent such might be. Comtesse F. Hamilton is a variety that is sure to please, and I cannot understand why it has so long remained in obscurity. It was introduced by M. Nabonnand some six or seven years ago.—P.

THE USEFULNESS OF BIRDS IN GARDENS.

THE article dealing with the usefulness of birds on p. 403 is very interesting reading, but to the English gardener several of the birds mentioned are comparative strangers, and one bird in particular, namely, the tomtit, is praised beyond that which in common fairness can be claimed by him. There are those who have written, and still write, favourably of this bird, and the wilful mischief, which is sometimes considerable, is set down as a necessity in the search for insects. By the fruit grower in general such a theory cannot be accepted; the many bushels, both of Pears and Apples annually spoilt by the tomtits just previous to their ingathering reduce them to a curse rather than a blessing to the gardener. It seems sheer nonsense to praise a bird capable of such wanton mischief as the tomtit is. Theorists will say that the numerous and often tiny holes bored in Pears and Apples are made in the search for insect food, but this argument does not find substantiation when he invariably chooses the best kinds and often the largest fruits, leaving others unmolested. As a rule, too, Nature endows animal creation with the rare instinct of being able to trace the whereabouts of their natural food. In the many bushels of spoilt Pears that are annually thrown out there are very often no insects present, and the same can be said of Apples. The bird is equally as destructive among Peas in summer as fruit in autumn. The theory of the search for insects gets but scant recognition when the gardener finds his supply cut off, the pods being stripped of the seed before they have time to attain a useful size. If insects are what they are in search of, why do they so greedily devour the seed when there are no insects encased? The quotation of the writer of the notes in question which says, "Besides being actively useful, there is nothing to be said against the bird in any way," does not represent the feelings of the English fruit grower. There may be a period of the season when it might do some good in hunting down insects, but the damage which it does much more than counteracts any good it does in other directions.

The cuckoo, on the other hand, fully deserves all that is said of it, for its utility in the destruc-

tion of caterpillar life cannot be over-estimated. To the gardener the cuckoo is a friend. When in their season the Gooseberry caterpillars appear to defoliate his trees, the cuckoo if unmolested quickly makes a clearance, but its shyness is such that it does not often venture into small gardens: hence its merits are neither universally known nor sufficiently appreciated. For several years I have had no occasion to resort to drastic measures for dealing with Gooseberry caterpillars simply because the cuckoo converts them into food before they have time to commit serious mischief. His visits are mostly paid during the early morning or the evening, when all is quiet and he is not disturbed. It might be truly said of this bird that, besides being actively useful, there is nothing to be said against him in any way. Of the tomtit this cannot be truthfully said, and so convinced

holes too much crowding is usually observable, particularly in private gardens. Those who bunch for sale, of course, are less apt to err in this particular, their aim being to make as much of the flowers as possible.—N. N.

FLOWER GARDEN.

MELIANTHUS MAJOR AND M. PECTINATUS.

THE *Melianthus*es are members of a small family of South African plants, and up to the present but rarely seen outside botanic gardens. Any one who has had the misfortune to see them in such institutions as woe-begone plants 3 feet or



Melianthus pectinatus.

am I of this, that I lose no opportunity in destroying all that come within my reach. W. S.

Exhibiting Violets.—I am pleased to note that classes for Violets at Chrysanthemum shows are becoming more general. I would draw the attention of exhibitors to the folly of bunching the flowers up tightly in a close mass. This not only hides the merits of the individual blooms, but destroys all gracefulness. The best way is not to tie the flowers up at all, but to arrange them quite loosely in small glasses or vases just sufficiently high to allow of the outer Violets falling loosely over the sides. Each flower is then seen to advantage. Even in bunching up Violets for sending to a distance or for sprays or button-

4 feet in height, and bearing three or four miserable-looking flowers, must have reluctantly classed them among the great group of botanical weeds. He would, however, be doing them an injustice, as with proper treatment and a little care they can be made really valuable plants for the garden. The family of *Melianthus* includes five species of pretty uniform habit. All are shrubby plants with feathery foliage, which bears some resemblance to that of the *Rosaceæ*, from which, however, they are widely separated. The oldest species of the family is

MELIANTHUS MAJOR.—It was brought to Europe in 1688, and is the form most commonly seen in gardens. It is striking by reason of the bright,

strong grey-green colour, which at full maturity covers the whole plant. The large feathery and indented leaves look very handsome in their verdant colouring, and fit it for isolated positions on lawns as well as for mixed planting, in which it is seen to the best advantage. It needs full sun, rich soil, plenty of water, and manure.

M. PECTINATUS, the subject of our illustration, was first introduced from Namaqualand in 1870. It was discovered by Sir Henry Barkly, the then governor of Cape Colony, who sent seed of it to Sir Jos. Hooker at Kew. Sir J. Hooker judged it to be a perfectly new kind, and described it in the *Botanical Magazine* as *M. trimenianus*. Later, however, it was proved to be identical with an older species named by Harvey *M. pectinatus*. One of the plants raised from the seed sent by Sir H. Barkly to Kew found its way to La Mortola, where it very speedily developed in growth, and in the year 1879 flowered and bore fruit for the first time. As an ornamental plant *M. pectinatus* is much to be preferred to *M. major*, and if not quite so quick a grower, it leaves little to be desired in this respect. It forms in a comparatively short time a light, handsome bush with very attractive foliage. The leaves are each 4 inches to 6 inches in length, bright glossy green on the upper side, on the lower side thickly covered with hair. The deeply cut nerves and the well-defined outline give them a particularly handsome appearance. The flowers of both species are borne in upright clusters. Those of *M. major* are borne on strong, long stems high above the plant, and these flower-clusters, with their numerous dull brown blooms against the bright green foliage, form a singular contrast. The flowers have a large calyx, which is somewhat wider in the lower part, and the bottom petals are drawn back. This wide calyx is always filled to the rim with a curious dark brown honey liquor, which exudes with every motion of the flower. In their native habitat these flowers are visited by flocks of small kinds of birds for the sake of this liquid. The flower-clusters of *M. pectinatus* are shorter and the flowers smaller, but brighter in colour. The small petals soon overtop the calyces and form bright red tufts at the end of the clusters. In less favoured surroundings and with scantier blooms these plants are still well worthy of a place in gardens. They grow readily from cuttings, and, moreover, the seed is easily obtainable. In winter they require the protection of a not too moist greenhouse.—*Die Gartenwelt*.

New double Violet James Watt.—I recently saw a fine exhibit of this new Violet, and, although not personally in favour of the purplish shades, think it will soon become popular, as I was informed that it is a very free and constant bloomer, and, what is more, it possesses a rich fragrance. This latter fact, together with its free-flowering character, will ensure its culture by those whose chief aim is profit. What a pity it is the good old Neapolitan is somewhat particular as to soil and situation, as it is undoubtedly the king of doubles when seen in its true character, the colour being so delicate. I hear a very glowing account of the latest introduction in the single section, viz., *La France*. If, as is reported, it supersedes the now justly popular *Princess of Wales* it will be an acquisition indeed. At any rate, Violet growers have now a fine selection, and the culture of these beautiful flowers is becoming more and more general.—J. C.

Michaelmas Daisies.—I read with interest on page 390 an article on Michaelmas Daisies by "T. J. W.," and noticed he spoke very highly of *Aster spectabilis*, a variety I have endeavoured to obtain on several occasions, but failed to get it true to name. Perhaps he would be kind enough to inform me where I can procure the true variety. I grow a large number of Asters. Some of the best which I can strongly recommend to all lovers of hardy plants, in addition to the varieties quoted by "T. J. W.," are *cordifolius Diana*, a charming pale lavender colour, height 4 feet; *turbinellus*, violet, tipped rose, a very graceful

late variety, height 3 feet; Walter B. Childs, deep lilac, 5½ feet; Mrs. C. W. Earle, lovely French grey, 5 feet; Nancy, bright pale blue, good habit, 4 feet; Novi-Belgii densus, bright blue, very free, 3 feet; Top-sawyer, large pale blue, 5 feet; levis floribundus, deep blue, 4 feet; St. Brigid, white, very free, 4½ feet; Henryi, bright blue, very distinct and early, 2 feet; Novæ-Angliæ J. F. Raynor, deep red, 4½ feet, large flowers, an improvement on N.-A. ruber; and Pleiad, a little gem, growing only 15 inches high, with bright rose flowers.—E. BECKETT, Aldenham House Gardens, Elstree, Herts.

Sternbergia lutea.—Much has been written of late regarding the blooming of this. I believe it blooms far more satisfactorily in a dry, light soil than otherwise. I doubt its ever blooming with any degree of freedom when frequently replanted unless the bulbs are very strong and placed in a position where the soil gets very dry in summer. I have a big patch upwards of 2 feet across. Some eleven years ago I found this in the same position as now. Then there were only four or five bulbs. From that time till now it has never been disturbed, with the result that it increases rapidly and every year blooms more profusely. This last autumn I counted thirty open and nearly as many unopened flowers on a foot space of this clump. The few first years it scarcely bloomed at all. The position is at the foot of a south wall on the top of the roots of a Rose. Here the soil gets very dry from the Rose absorbing the moisture, while as the bulbs increase they, too, help to dry the soil. Recently when in Norfolk I saw this blooming freely in quite a small state in a light, dry soil. In Dorset I have seen it growing at the foot of a Pear tree in strong soil, and left undisturbed bloom freely.—J. C.

Pyrethrum uliginosum.—A note appeared in a recent issue of THE GARDEN respecting this plant. I quite agree with the writer that the fact of its being such a tall grower is a rather serious drawback; especially is this so when it is planted in narrow borders. The great height to which it then attains makes it appear quite out of place. The writer of the note in question touches on the cutting-down method to induce a dwarfer habit of growth, but mentions that the process causes the flowering to be too late for the blossoms to be useful. I have in some seasons had the young growths cut down in the month of June, and have had them flower well the latter end of September and the early part of October. Locality has, of course, a great deal to do with the success or otherwise of this cutting down, as, although the method answers well here, I can quite imagine that it would throw the flowering too late for the blooms to be of any service in other places. However, where the climatic conditions will admit of the method being practised with profitable results, it makes a considerable difference in the height of the plants and renders them more fit subjects to grow in company with other herbaceous plants when their great height is a serious objection.—A. W.

Border Auriculas.—Whilst there are differences of opinion as to whether the autumn or the spring be the best season for transplanting border Auriculas, on the whole I prefer doing the work in the autumn, and in cutting pretty hard back those root-stems that will always develop in Auriculas, and then when new roots higher up these stems are emitted, the plants remain undisturbed and soon become well established. It not infrequently happens that plants, because so enduring, remain for many years in the same place and become large clumps, yet very ungainly ones, because the stems are exposed. Some good may be done in the spring by giving to each such plant a liberal top-dressing of old pot soil that is rather sandy, as by the autumn these otherwise naked stems may have put forth roots, thus enabling the plants to be hard root-trimmed and replanted in the autumn. Whilst doing well generally in ordinary soil, yet where it is stiff, a good admixture of sand or grit is helpful, and some well decayed manure is so in all cases. Then the individual portion with new roots attached

may be dibbled in to form a clump of some six or more, and thus large patches are soon formed that remain good for two or three years. It is well to fix the soil about the young plants firmly, whether put in singly or in quantity. These Auriculas are so hardy, that neither rain, snow, nor frost seems to do them any harm.—A. D.

FLOWER GARDEN NOTES.

If it is a fact that up to the time of writing (November 1) the rainfall for the year is some 10 inches below the average, the poor display made by perennials that are not at their best on a light dry soil is easily accounted for, and as the amount of rain to hand at this time has only penetrated some 4 inches or 5 inches, there are two points in connection with autumn work on hardy plant borders that may be worth enforcing. First, in all planting to take care that the ground about the plants is well soaked, and second, not to be in too great a hurry with surface-mulchings, as anything placed on the top of the ground will naturally be all against the rain (when it comes) penetrating the soil. Although borders are on the dry side and scarcely in a condition that one likes for planting, it is hardly advisable to postpone this work, for if frost makes its appearance when the present month is well advanced, it may come to stay and prevent further planting until some time in the new year. Among comparatively dwarf plants, the choicer Pinks from cuttings and Carnations from layers were never better, and have been planted. The dry summer was against the Carnations and I was anxious as to a good strike, but they were layered early, well looked after in the way of water, and lifted in capital trim many varieties with a mass of roots that would have filled a 4-inch pot. I may note in the matter of layering that, with the anticipation of a dry time, not so much prepared soil was put round them as usual, not more than an inch in depth. This was a mixture of peat-moss manure well broken to pieces and road sand well incorporated with the soil already round the plants. I should certainly be on the side of those who write favourably of peat-moss manure. It is a capital thing as the principal ingredient in layering soil, as after one thorough soaking the moisture is well retained, the plants root into it remarkably well, and it hangs well about them at lifting time. It should be thoroughly broken to pieces with a fork before mixing with other materials. One special characteristic of the plants this season is that they are good throughout. Sorts sometimes a bit miffy, as Countess of Paris and Ketton Rose, are this year as well rooted as the more robust varieties. The only weak point is a touch of disease in the Clove section. Other front row plants to be strengthened—this is of which occasional large clumps will be made—are a specially selected strain of dark Polyanthus, Geum coccineum, the dwarfier of the Pyrethrums and Dianthus. In all planting arrangements I endeavour to rely chiefly on those things that will be useful for cutting as well as making a good display, with a preference for such as stand well in water and that are favourites in the house. In taller plants, besides those already mentioned, that do well for the centres of borders, and are very acceptable from these standpoints, are Doronicums, Monstretias, Aquilegias, the dwarfier Phloxes, Statice and many others. Our borders were well overhauled last season and not much will be necessary this year; still, in the best regulated plantings mistakes are made, and these will be rectified as far as practicable.

E. BURRELL.

Keeping Gladiolus bulbs.—There are many disappointments attending the culture of Gladioli, and even when the bulbs are lifted and stored for the winter in an apparently sound condition some will now and then go off with a kind of dry rot, these often being the most prized varieties. I think they are often kept in a too dry and airy position, this partially shrivelling the bulbs, which is a great evil, as unless their

plumpness can be preserved till spring, the flower-spikes are sure to be inferior. The best way, I think, is to embed the bulbs in sand or leaf-mould, preferably the former, and not to store them in a draughty place. Occasionally bulbs are left in the ground all the winter, and if frost is not too severe they remain sound, which proves that a too dry, airy shelf is not the best winter quarters.—GROWER.

Spanish and English Irises.—The bulbs of these charming plants are extremely cheap this year, and anyone with a garden ought to grow them. My reason for calling attention to them now is that after this date less satisfactory results will be obtained from planting than if got in at once. The colours are remarkably rich and varied, some of the whites in the Spanish forms being really lovely, as well as the deep blues and a kind of terra-cotta tint not at all common in hardy flowers. They seem to thrive anywhere and in almost any kind of soil, increasing rapidly, and, beyond planting and weeding, giving no trouble whatever.—H.

Strong-growing Violets.—Whilst there can be no doubt that such new varieties as Princess of Wales, La France, California, and other single Violets produce large flowers, they also give very strong foliage. That is not an unmixed good, as very large leafage is not desirable in Violets, and the appearance is not so pleasing as is the foliage of such varieties as Czar, Wellsiana, Victoria Regina, and one or two others that, whilst robust and giving fine and very sweet-scented flowers, yet wear a much neater appearance. Certainly of single Violets we seem to have enough. Whilst the newer introductions give such large blooms, there is no improvement in colour or in perfume.—D.

Double Primroses.—I saw in a market garden last spring a breadth of several hundreds of double white Primroses. This variety is usually held to be the best grower of the section. I saw the same breadth a few days since, or rather its remains, for there could hardly be found one plant worth having. No doubt the long drought and baking sunshine had dried up the plants, although, being near plenty of water, they frequently had a good soaking. We seem unable to grow double Primroses at all satisfactorily in the south. No one cares to be continually replenishing his stock from Scotland or Ireland, and plants obtained from these countries in the winter, if ever so strong, seem to have lost all capacity to grow after one season's exposure here. Even with single Primroses and Polyanthus the best results are obtained by annual sowing.—D.

Verbenas.—The only coloured plate of Verbenas in THE GARDEN previous to the recent one of V. Ellen Willmott was nearly twenty-one years ago, at which time they were far more universally grown than they are to-day. A decade or so previously was, however, their most popular period, and a glance at the list of plants certificated by the Royal Horticultural Society will show that in 1868 no less than seventeen varieties received certificates, while in the four years previous and the two succeeding ones the numbers ranged from eight to eleven. About that time I was in a garden where bedding plants were grown in very large quantities, and as the raising of Verbenas from seed was not then thought of except for the production of new varieties, many thousands were propagated from cuttings every spring. The stock plants were kept as cool and airy as possible during the winter months, and about the middle of February the plants were taken into a warmer structure, where a minimum temperature of 60° was maintained. They soon commenced to grow freely, and directly the young shoots were long enough they were taken as cuttings, shallow boxes being prepared for their reception by filling them with sandy soil. The soil was very lightly pressed down and the cuttings inserted therein. One good watering through a fine rose sufficed till the cuttings were rooted. Till this took place they were kept in a close propagating case in the same structure in which they had grown. The young plants were then hardened off as quickly as

possible and potted into 3-inch pots. Their tops having been pinched out, they formed neat little healthy plants by the bedding-out period. This being the time of long ribbon borders with unbroken strips of one colour, some of the varieties of *Verbena* were of course very popular for the front rows, especially as the disease had not then to be reckoned with. There is, I think, little doubt that it is caused by continuous propagation from debilitated stock, and the way out of the difficulty is to raise one's supply from seed. If disease-proof plants could be ensured, we should doubtless again see *Verbenas* more generally grown, as they form a bright and telling feature during the summer months.—H. P.

WINTER VIOLETS.

I AM afraid Violets in many gardens which lie high and dry, and where mulching and regular vigorous syringings have only been carried out in a half-hearted manner, will be much disfigured and weakened by red spider. I know it was so last season, and those who plant runners from spider-infested plants must pay the penalty. We sometimes read of individuals growing their Violets in open, exposed situations and finding them satisfactory, but my experience has always been that the surroundings must be naturally very favourable, or unmulched, seldom-watered beds are sure to fall victims to their great enemy. I have often noticed that odd patches of Violets, especially Neapolitan, put out here and there and left to themselves have in tropical seasons had a very yellow appearance, while beds occupying shady positions and well cared for have been quite or almost free from insects, and so far as labour is concerned, nothing repays it better than Violets. For many years in succession I grew the double varieties on the same site, being short of ground. Had I depended simply on manure dug in annually I should no doubt have failed, but I made biennial additions of good loamy soil, leaf mould from the Pine stove beds and road scrapings. Every few years also I took out 18 inches deep of the border and replaced it with a similar depth of loam and the above-named correcting materials, which produced a stout, free growth and abundance of bloom. In gardens where only a limited area is devoted to Violets of the double-flowered section, better all-round results are obtainable from the incorporation of the above-named ingredients than common farmyard manure. The latter tends, especially in wet, sunless seasons, to promote a vigorous growth, it is true, but one which is easily affected by damp and fog in winter. The position I always found best was a border which enjoyed the sun's rays for a few hours only in the morning. One important thing in winter treatment is providing perfectly drip-free pits or frames and free exposure during fine weather. During the prevalence of cutting winds the lights should not be drawn up and tilted, or the young foliage will soon suffer. Frequent dribblings of water are a mistake. A good soaking from summit to base after planting, repeating it in a few days' time, will generally suffice till February, except in extra dry, open winters. There are, I believe, cultivators who mulch the surface of their frame Violets with cocoa-nut fibre in order as they suppose to prevent evaporation and also prevent damping, but I should not care to practise it, as it must exclude air and what sun's warmth there is in winter from the roots. Abundance of fresh air, occasional surface-stirrings, and the removal of all decayed and yellow leaves are necessary. Those whose plants are infested with spider should dip each one in sulphur water before planting, but they had better obtain a fresh stock of runners from a healthy source in spring. J. B. S.

The double Cowslip.—In looking lately over some old volumes of London's *Gardener's Magazine* I came upon some references to this plant. These induce me to inquire if it is still in cultivation. The plant to which I refer is not a *Hose-in-*

hose Cowslip, but one truly double. Readers of Gerard and Parkinson will have come across the references made to it by these old writers, but, so far as I can recollect, I have seen no mention of it in current garden literature. Under the name of the *Double Paigle* it appears in the works of both of these writers, in whose day it seems to have been common. I fear it has shared the fate of many old flowers prized in their day, but since neglected, because of the abundance of new plants. The first mention of the double Cowslip in the periodical referred to appears to have been made by that ardent plant lover, the Rev. W. T. Bree, of Allesley Rectory, in the year 1828, in a letter asking if it was still in existence. In 1830 a letter in reply from Mr. R. Errington, of Oulton Park, was published. In this Mr. Errington stated that he had obtained one from a cottage garden and had bloomed it the previous year, and that it was as double as a Rose. This was succeeded by a letter from Mr. Bree, in which he said that he also had succeeded in obtaining a plant. As a garden plant it must have been inferior to some of the single Cowslips, and it is likely that it would not be much appreciated in the present day. As a curiosity and as a plant which would help to link our gardens with those of the fathers of British gardening it would, however, be treasured by some.—S. ARNOTT.

Callistephus hortensis.—I fear "H. P." and "A. D." are confusing two very different things in writing about this species. I say "species" advisedly, as it is found growing in a wild state in China and Japan and as far westwards as Afghanistan. It was first introduced in 1731 to the Jardin des Plantes at Paris by the Jesuit Father d'Incarville. It appeared at Kew the same year, doubtless from the same source. Both English and continental growers soon recognised its value. The results of their labours are now to be seen in the beautiful double forms commonly known in gardens as China Asters, to distinguish them from the Starworts or Asters proper. Like many other plants that have been taken in hand by the hybridiser—the species from which the double *Begonias* have been developed, to wit—the original species dropped out of cultivation as soon as new forms were obtained from it. Until the *Callistephus hortensis* in a natural form was re-introduced a short time ago, very few people ever dreamt that its progeny had such a parent. The form exhibited at the Drill Hall and figured in *THE GARDEN*, the *Botanical Magazine*, and other periodicals is a true species, and must not be confounded with the degenerate forms of the double China Asters, about which "H. P." and the anonymous correspondent at p. 348 have evidently been writing. It comes quite true from seed, and among the many plants I grew this year I did not see one showing the slightest sign of breaking away. I cannot agree with "A. D.'s" suggestion that a natural species of this kind, even although an annual, should be given a fancy English name.—JOHN WEATHERS, *Isleworth*.

NOTES AND QUESTIONS.—FLOWER.

Dahlias in November.—It is not often that Dahlias are to be seen in full bloom in the middle of November, yet such is the case this season. The blooms are now not only finer, but more abundant than in September, when, although the plants were kept well watered, the buds that were plentiful failed to expand freely. Since a moister atmosphere has prevailed there has been no lack of bloom, and the plants are still growing luxuriantly.—J. GROOM, *Gosport*.

Michaelmas Daisies.—Few flowers have so much increased in public favour as the several varieties of Michaelmas Daisies. Certainly they deserve all the attention that can be given them. When left year after year in poor soil to struggle for life with all sorts of other plants, they do not strike one as worthy of much care, but if set out at wide distances apart on fresh deeply-cultivated soil, they will astonish even those who have grown them for years. During the protracted drought of the present year I had some single plants on extra good soil that defied the drought and made a glorious show in the autumn, while the

old roots in closely planted beds had a difficulty in keeping alive, much less in making a good display of bloom.—J. G., *Gosport*.

Crinum Powellii.—Recently I saw this in good condition at Diddington Hall, Norfolk. It had bloomed abundantly, as could be seen by the number of flower-stems. In the hardy plant garden it was grown in a large bed in a mass. In the kitchen garden I observed a large clump growing at the foot of a warm house. In both places it bloomed equally well, but earlier in the kitchen garden. Some twenty to twenty-five years ago this was grown well in an open bed at the Pine-apple Nursery, Edgware Road.—J. CROOK.

Clematis cirrhosa.—Although I have tried all the principal Clematis growers, no one appears to have young plants of this to dispose of. I suppose the more showy varieties of the Jackmani type, that are now grown by thousands, are more profitable, but one would think with all the increased demand for hardy plants and climbers of all kinds that some specialists would get all the obtainable varieties together. Possibly some reader may be able to say where it is obtainable, for although one of the small-flowered section, it is well worthy of culture by reason of its early flowering.—JAMES GROOM, *Gosport*.

CHRYSANTHEMUMS.

CODDLING CHRYSANTHEMUMS.

THE culture of Chrysanthemums for large blooms for exhibition or home decoration has obtained such a hold on growers of all classes, and the need of early propagation is so generally understood, that it has come to be quite the custom to root the cuttings early in the winter. The consequence of this is that the plants when young—in fact, for the first four months of the new year—are a constant worry to those who have them in charge. They are not sufficiently hardy to stand outside in cold pits, and, where the supply of pits well built and with means of turning on a little heat on cold nights is short, they are removed about from pillar to post during the intervals of cleaning fruit houses, or else kept in structures much too hot for them. In almost every case they are not kept sufficiently cool, and the want of light and air is keenly felt until it is time to place them quite out of doors. Not only is this the case when they are in the small pots, but when the plants are potted in 6-inch pots they are often perforce stood almost pot-thick in deep pits or plant protectors. If only those who grow for exhibition did this, or if these rooted only their show kinds early and the bulk of the decorative stuff a couple or even three months later, not much harm would be done, but the almost universal system of early rooting and subsequent coddling will sooner or later so enfeeble the constitution of these fine decorative subjects that their culture will be far more difficult.

Good cuttings rooted in February come away quickly, and by the end of March may be stood out in quite cold frames, having become well established in 3-inch pots. If required for growing on the single or treble-stem system they will not require stopping, but for bush plants the points of the shoots should be taken when only a few inches high. Being, as it were, brought up hardly these plants are safe outside a good while earlier than those which have been kept hanging about the houses; they are far less liable to contract fungoid and other diseases, and will be quite large enough for decoration. In the case of plants grown on with the show batches, and later cut down with the object of making them branch out, the stems are never so strong, and unless carefully staked as they grow the branches snap out wholesale and are often blown out by wind. But those described above, on the other hand, are much harder at the base of the branches and may be left until almost full grown before a stake is put in. There is, in short, a distinct gain in late propagation for all excepting exhibition kinds. SUFFOLK.

Special prizes at Chrysanthemum shows.—At some exhibitions these are very numerous,

and are largely offered by members of the trade. There is, perhaps, no great objection to this custom, for it helps to swell the prize list and thereby attract competition. While in France lately a new aspect of special prizes occurred to me, and it was made evident by the imposing list of them which was hung up at the door of the Lyons Chrysanthemum show. The special prizes offered here had none of the taint of business interest about them, but, on the contrary, it was more in the light of a generous encouragement to horticulture that they seemed to be given, inasmuch as they came from high places where no hope of ultimate profit could possibly be desired—thus the President of the French Republic gave a Sèvres vase; the Minister of Agriculture, 550 francs and three medals; the Conseil-Général du Rhône, 900 francs; the City of Lyons, 1500 francs; the French Agricultural Society, three medals; the French National Chrysanthemum Society, the English National Chrysanthemum Society, the Italian National Chrysanthemum Society and other societies all joining in the evident disinterested desire to promote the success of the show.—C. H. P.

Disbudding Chrysanthemums.—Disbudded specimen Chrysanthemums are very imposing-looking when well grown, not too formally staked out, and when the right varieties for the purpose are chosen, as there is a great difference in their capabilities to form healthy bushes surmounted by from eighteen to twenty-four flowers each. The flowers such plants produce are a sort of compromise between those grown on bush plants not disbudded and those from plants on which only three blooms are grown, and when the varieties are chosen which fill up their flowers well without becoming too lumpy the result is good. Varieties I have noted as good for the purpose include Vivand Morel, with its sports, Charles Davis, Lady Hanham, and Mrs. J. Ritson; Nellie Pockett, very fine, and perhaps the best of the whites which can be grown in this way; Charles Curtis, a model incurved yellow; Duchess of Eife, incurved white, very fine; Mrs. Mease, which appears to be far and away the best of the Carnot family this year: M. Freeman, bright silvery pink, an old variety which carries its flowers in good condition longer than any other variety I know, and the old, but indispensable W. H. Lincoln, than which a better Chrysanthemum for general purposes was never raised. I have not yet found the ideal crimson for this purpose.—J. C. T.

VARIETIES OF CHRYSANTHEMUMS.

ALLOW me to thank "H. S." (p. 415) for his "Notes on Varieties," as the information contained therein is particularly valuable to many lovers of this beautiful autumn flower. I am perfectly in accord with the writer in considering that size alone carries too much influence, for many of the huge blooms are very ungainly, and, what is more, they are often of a washy, undecided tint. In various catalogues the colours of different varieties are given as pink, rose, rosy pink, rosy lilac, rosy purple, purplish pink, pale purple, and numerous other combinations, whereas there is very little difference to be found among the whole of them. True, an individual flower of one variety may be widely removed in colour from one of the others, but different methods of culture play a considerable part in the tint of the blossoms. One noticeable feature of Chrysanthemum shows at the present time is the scarcity of brightly-coloured flowers, for many stands consist almost entirely of light-tinted blossoms. Pure white flowers are certainly very beautiful, but the same cannot be said of those with a pinkish tinge, which gives the impression of one past its best. So great is the demand for large show flowers that the merits of many of the best varieties regarded from a decorative point of view are apt to be overlooked, and several of the older kinds now almost forgotten are superior in everything except size to many of recent introduction. A few that sug-

gest themselves just now are: Mlle. Lacroix, an extremely pretty white flower; Edouard Audi-guier, crimson-amaranth; James Salter, blush, like a bunch of loose ribbons; Lady Selborne, pure white sport of the preceding; Bouquet Fait, pink; Source d'Or, golden orange; Criterion, amber; Elaine, white; Jeanne Delaux, rich crimson, for some years a general favourite; President Hyde, golden yellow; Tokio, glowing scarlet-crimson; Buttercup, rich gold; Val d'Andorre, red; Cullingfordi, intense velvety crimson; Reine des Beautés, bright red. Vivand Morel and its sports, Charles Davis and Lady Hanham, are in every respect very beautiful, and the same may be said of Sunflower. Florence Davis is an extremely pretty variety, with long, drooping florets, sometimes slightly twisted. The colour of the flower is white, with the centre deeply tinged with green, which gradually pales as it extends over the bloom. This green shading, however, varies considerably according to the treatment given to the plants. It is less pronounced in Florence Davis than in Mme. E. Roger, but as a set-off the former is a far more graceful flower. The above must not be taken as a complete list, but it may serve to direct attention to a few good old decorative kinds. T.

Chrysanthemum Mme. E. Roger.—This new incurved Chrysanthemum will now be grown by those who favour novelties, but I cannot say I care much for these greenish white flowers. From what I have seen of it it does not appear to be a very good doer, the general build of the flower being far from compact. Perhaps culture and time will improve it. Decided colours are, I think, preferable. Speaking of these, I am glad to find that really beautiful variety Val d'Andorre still grown by some. The colour is so distinct and pleasing that where plants are grown for conservatory or room decoration this variety cannot well be dispensed with. It is fortunate that while many of these beautiful varieties are discarded by exhibitors, gardeners and others who want to make an attractive display in the drawing-room and on the dinner-table wisely retain them.—J.

Undisbudded Chrysanthemums.—I am pleased to find that numbers of people, while allowing the monstrous exhibition Chrysanthemum bloom its due merits, are nevertheless much attached to the smaller, more naturally-grown blooms, especially for cutting. It is surprising what a number of amateurs and even cottagers adjoining large towns now grow creditable batches of plants for the adornment of their small green-houses, many of them home-made. In many large bay windows also beautiful groups of Japanese varieties may be seen artistically arranged. Few of these are disbudded, but, being grown in comparatively small pots and not highly fed, all or most of the side buds open and keep up the display for a considerable time. For garden decoration these are by many still preferred, and it would not, I think, be a bad plan for the National Society and others to offer prizes for this class of cut blooms.—B. S. N.

Chrysanthemum Comte de Germiny.—I was pleased to see this, a favourite variety of mine, referred to by a correspondent, who also praised the weakly growing, but beautifully coloured Jeanne Delaux, a variety which cannot be surpassed in its season for arranging in vases and glasses. I used for many years to grow a number of Comte de Germiny for decoration in January, and by keeping them out under canvas as late as possible and giving them cool, shady quarters when housed, the plants never failed to give an abundant supply of their graceful feathery blooms at the period named. For these late cuttings, however, it is utterly useless to grow the plants under the feeding system. Small rather than large pots, a holding loamy compost containing a small percentage of bone-meal, and hard potting are essential, the growth topped once, and the position during the summer months an open sunny one, avoiding the least crowding.

Comte de Germiny is not subject to mildew like some sorts blooming after Christmas.—C. B. N.

NOTES AND QUESTIONS.

Chrysanthemums in open air in December.—Seldom have we had a season when these gave so much satisfaction in the open as this year. It is not unusual to have a good display in the open during the early part of November, but there will be many gay patches of these against walls well on to Christmas if severe frost keeps away. I have now (early in December) fine masses of Julie Lagravere standing in an open border and that fine single kind, Mary Anderson, against a wall. I noticed a day or two ago several of the old kinds, such as Tokio, making a fine show against a farmhouse wall.—DORSET.

GARDEN FLORA.

PLATE 1252.

TORCH LILIES.

(KNIPHOFIAS.)

(WITH A COLOURED PLATE OF K. TUCKER.)

WHILE the bracketed generic name here cited is the more recently adopted one by botanists, it will take many years before the more generally employed term *Tritoma* falls into disuse. Not many gardens of note are without some of these showy perennials. Of their uses, much, if not indeed all that is worth advancing, has been said from time to time. Thus it is that culturally little remains to be said of a family that almost all may grow with a very full measure of success. One thing, however, may be noted with advantage. It is the danger accruing to the plants from a soil over-rich in humus. A very common piece of advice is that these plants delight in very deep and well-enriched soils. The depth of soil is naturally a highly important matter, and many things respond most liberally for such care. The question of enriching, however, is quite another matter, because if heavy doses of manure are given it is more than likely that the plants becoming over-luxuriant will be among the first to suffer, if not to succumb altogether to our English winter weather. It is not of course a question of soils too fully charged with manure; there is an innate tenderness in constitution all round, and which is not remedied, even if at all modified, in any of the numerous progeny that has been raised during recent years. Encourage the root-fibres down as deeply as you may into good bodied soil. If the soil is in need of manure, use it by all means, always, however, at a safe distance from the roots. Big clumps of these plants send roots down to an astonishing depth. The more heavy class of soils rarely requires manure to the same extent as light soils, but instead, when planting a bed of *Tritomas*, mix plenty of old mortar or brick rubbish, burnt clay, ballast or the like with the ordinary soil. This is always of assistance and frequently helpful to the plants.

Of more than passing importance is the depth at which these things may be planted. Indeed, I regard this as of considerable importance, deeply planted specimens frequently passing through a trying winter safely when shallow-planted groups will suffer materially. By deep planting it is intended that the junction of leaf-blade with root-stock shall be kept 6 inches below the surface. In such case, even though the main crown is destroyed by severe weather, the side shoots are usually safe at the depth named. The best season for breaking up old clumps and planting these Torch Lilies

* Drawn for THE GARDEN in Mr. Perry's nursery at Winchmore Hill by H. G. Moon. Lithographed and printed by J. L. Goffart.



Banksia laevigata

is early in the year, say March or very early April. Autumn, and late autumn particularly, is not a good time, because few, if any, new roots are made during the winter months. If, however, from any cause, such as re-making a border, plants have to be moved in autumn, the foliage must be left intact. Owing to a mistaken notion of tidiness, these plants are at times reduced to a veritable stump 9 inches or a foot long and planted thus. Should a severe winter, or even an average one, follow, many of these plants will perish. Where a good collection of these Torch Lilies is grown it will be prudent to anticipate severe weather and protect the plants. Here, too, for protection avoid all manures, particularly those of a close, wet, heavy nature. All such do harm rather than good. Where leaves can be gathered dry, or nearly so, these form an excellent protection. Coal ashes may be used in some instances, but such do not benefit all soils, though their value for protection is in many cases excellent. Four inches thick of ashes would make a good covering that could easily be removed in March or April ensuing. Anything that will admit air rather freely and not decay readily is the better covering for such plants. Big isolated clumps are best tied up to stakes, inserting dry Bracken or Heather among the leaves as the latter are gathered up. The great destroyer of big clumps is snow settling in the hearts of the plants, and as these are not easily replaced they are worth protecting. Some kinds are less hardy than others, and the newer hybrid kinds show no improvement in this direction.

There is, perhaps, little hope of securing a perfectly hardy race of these Torch Lilies, though much may be done by selecting the hardiest flowered types for future operations. The hybridist would do well to avoid such sorts as *K. caulescens*, usually less hardy and useful than many. On the other hand, something may be done to encourage a later-flowering race of these by raising seedlings between *K. Nelsoni* and that most brilliant late kind *K. R. C. Affourtit*. These two have long tubular blossoms of rich colour, and spikes are freely produced; indeed, for fine effect the latter will require some beating. The least attractive, perhaps, are those with very short tubes and long protruding stamens and anthers, the real attraction being in the colour of the tubular blossoms, and the longer these are the finer the effect. The introduction of kinds with much shortened racemes of flowers should not be encouraged. Some of these are remarkable for their short, stumpy character, that alone prevents their making a lengthy display. The more extended racemes, on the other hand, continue long in good condition.

A very good and attractive sort, *K. Tucki*, is given in the accompanying plate. The variety is of good habit, with fine, almost Yucca-like foliage of a glaucous hue. It grows to nearly 5 feet high when well established, and possesses a value of its own by reason of its early flowering. Indeed, this is one of its chief attributes, which is not likely to be overlooked by those engaged in raising cross-bred forms of these plants. This variety flowers quite early in June and is frequently seen before that month opens. This is very early for a Torch Lily, and the plant is valued accordingly. E. J.

Veronica La Seduisante.—This shrubby variety of Veronica, which is of continental origin, must be assigned a place among the best of its class. Two years ago it received an award of merit from the Royal Horticultural Society, and since then has become more popular. It is

of a free, bushy habit of growth, and the long spikes of flowers, borne in great profusion, are of a rich bright purple, while the whitish anthers are very conspicuous against the rest of the flower. In the more favoured districts of England these shrubby Veronicas are valuable outdoor shrubs, but where this is not the case they form a welcome addition to flowering plants for the greenhouse at a time when variety is none too plentiful. They strike very easily and form dense, wig-like masses of roots. For this reason they can be lifted with but little check; hence they are often planted out during the summer, taken up, and potted early in the autumn.—H. P.

STOVE AND GREENHOUSE.

NERINE FOTHERGILLI MAJOR.

AMONGST autumn-flowering greenhouse bulbs this holds a foremost place. This *Nerine* blooms naturally about September, and when



Nerine Fothergilli major. From a photograph sent by Mr. J. Crook, Forde Abbey, Chard.

desired the season may be prolonged by forwarding or retarding the growth, as the case may be. It may be grown one or more bulbs in a pot, but from ten to eighteen in a big pot, as here illustrated, make a brave show. When used singly in vases, or in a group mixed with Ferns, this *Nerine* will be found very useful. Many look on this and other *Nerines* as difficult to manage. I do not find it so. I grow them in pots 6 inches wide and upwards. The one here illustrated is 9 inches in diameter. About every two or three years I shake the bulbs out just before they begin to grow, potting up the large bulbs one or more in a pot; the smaller ones are selected and grown on. The soil used is good sound loam and peat, with enough sand and broken charcoal to keep the soil open. When the blooming is over they are placed on the shelves in a cold house close to the glass and kept growing all

through the winter. When the foliage has ripened off water is withheld, and they are placed on a high shelf in a cold Peach house, and do not receive a drop of water through the summer. In the autumn when the bulbs begin to show, water is given, increasing this till the ball is moistened well through. Should the pots be very full of roots, a little manure water is given when growing and as the spikes increase in height. Large, well-ripened bulbs, as here shown, produce large heads and with stems 2 feet high. The success of this, as in many other bulbous plants, depends on being well ripened. It is unwise to begin watering the bulbs till you can see the flower-spikes.

Forde Abbey.

J. CROOK.

Heliophila scandens.—This very uncommon though decidedly pretty climber is just now flowering with great freedom in the succulent house at Kew, where each recurring autumn it is very attractive. This *Heliophila* is a native of South Africa. It is a free yet slender twining plant, clothed with simple pointed leaves and bearing in great profusion its pretty sprays of white blossoms, the only colour being just a suspicion of red at the base of the flower. It is well worth more attention as a climbing plant for the greenhouse, for the number of those in flower at this time of the year is decidedly limited. This *Heliophila* does not require any special treatment, growing well in a mixture of loam, peat, and sand. The position at Kew, where it is fully exposed to the sun, is particularly favourable to the production of blossoms, and if shaded the results are hardly likely to be so satisfactory.—H. P.

Zonal Pelargoniums.—Formidwinter flowering these are now so generally grown that there is no need to recommend them for the purpose. Easily and very cheaply grown and the brightest flowers of the season, they are plants for everybody with a greenhouse. One of the best lots of plants I have seen was at Ickworth during the week, a span-roofed house being filled with plants, each one a perfect little specimen and presenting in the mass a glorious blaze of colour. Among the brightest were Donald Beaton and John Forbes, the former an especially fiery scarlet, the latter with very fine trusses, but neither quite up to the standard for form. Among the doubles I noted the comparatively old Grand Chancellor Faideherbe, a kind that has never been beaten in its own colour, though this—dark magenta—is not the prettiest in zonals. Those that are best for the purpose indicated are the bright round-flowered kinds, of which Chas. Mason and Mr. Wm. Bealby are types. The improved F. U. Raspail, again, under its many names is an excellent double, and those even who are not fond of bright colours in the ordinary way are usually pleased with such as these in winter. Ample sun, light, and air winter and summer and proper cultivation are the principal requirements.

Pinguicula caudata.—This pretty Butterwort is a native of Mexico, of easy culture, and an exceedingly pretty little plant. For this

reason it ought to be more grown than is the case at present. The plants grow in small tufts of light green leaves and the rosy pink blossoms occur singly on the ends of the tallish spikes. The plants thrive best in a compost consisting largely of peat fibre and clean, freshly-gathered Sphagnum Moss with which a plentiful supply of crock dust and silver sand has been mixed. In order that an abundant supply of water may be given, a small pot should be nearly half filled with crocks as drainage, while larger ones may have a small pot inverted over the bottom and the intervening space filled up with crocks. Unless provision is made in some such way as this the soil is very apt to get soured by the continuous watering which is really necessary for this plant. The atmosphere of the house in which it is growing, too, ought to be well charged with moisture, as progress without this must of necessity be slow. A cool fernery or a house devoted to Mexican and New Grenadan Orchids suits it better than a warmer temperature. There are many ways of propagating it, seeds, cuttings, or leaves being used, and although it is not exactly a plant to grow in quantity, a few specimens have a very distinct and pleasing appearance at this time of year.

ARISTOLOCHIA ELEGANS.

Of really pretty stove twining and climbing plants we have none too many, and this is one that may with advantage be added to most collections. It is easily grown where a proper atmosphere and temperature are maintained, is of a pretty habit, and its flowers are decidedly handsome. There are several in the genus that bear flowers too large to be of any service outside the house in which they are grown, but *A. elegans* is a charming subject for cutting for choice decorations, long pieces of the trailing stems with a flower at each leaf axil having a beautiful effect depending from brackets or large vases in the house. The flowers do not last long, unfortunately, but a number are successively produced over a very long season, so their shortcomings in this respect may be easily overlooked. There are several ways of propagating *A. elegans*, but the easiest and best is by means of seeds, which may be sown in early spring in a strong, moist heat singly in small pots. The seedlings should be pushed along as rapidly as possible the first season, and with care may be grown into strong plants in 8-inch pots by the autumn. The growth may be allowed to ramble somewhat at will, as it will be necessary to cut them back rather hard, but it is important that the roots are carefully looked after and large shifts avoided. The object is in the first year to make a good foundation, so to speak, and have a nice quantity of well-ripened stems to cut back to.

During the winter the roots may be kept a little on the dry side, and the plants will be best in a greenhouse temperature. Early in the new year cut out all the weakest shoots and shorten back the bigger wood, placing the plants in a warmer house somewhat suddenly to induce them to break freely. When the young shoots are starting, the plants may be repotted and given a brisk stove temperature. When a little growth has been made the flowers will be seen forming in each leaf-axil, and they will continue to appear as long as growth is well maintained. The shoots require something in the way of a trellis to lay hold of, and have a habit of twisting about that is very pretty, but this plant is seen at its best on a roof in a fairly capacious structure, rambling at will among pillars or tie-rods.

Salvia splendens grandiflora.—For keeping up a bright display in the conservatory from early autumn until Christmas the above is one of the best plants we have. Nothing could exceed in brilliancy the long racemes of crimson-scarlet, the tube and calyx being equally bright. Unfortunately, the flowers soon drop when exposed to a change of temperature; therefore it cannot

be recommended for cutting, though if carefully gummed the flowers will hold on fairly well. It has found some favour among florists, but I should more strongly recommend it for those who have to keep up a bright display in conservatories. There is little difficulty in the culture of this useful plant. If a few plants are well cared for through the winter they will give plenty of cuttings early in the spring. I like to take the first cuttings as soon as they are ready and these will give good strong cuttings later on. The best plants are obtained from the strong growing tops, which if put in about the end of May will make fine plants by the autumn. By taking the tops of young plants it is easier to keep the plants free from red spider, which is their greatest enemy. The plants may be grown on during the summer in a cool frame or out-of-doors. I like to have them where they can be sheltered from wind and heavy rains. Potted in a rich loamy compost and grown on without any stopping, they make fine pyramids if given plenty of room, and will come into flower early in September. If given sufficient pot room and liquid manure from time to time, the same plants will continue in bloom for a long time.—H.

Abutilon Golden Fleece.—A correspondent recently brought this excellent variety before the notice of readers of THE GARDEN. Abutilons generally should be more frequently grown, as it is astonishing what a quantity of bloom a well-established planted-out bush will produce. Pot plants are most useful in their way, but they are generally needed for ordinary furnishing, much cutting soon spoiling their appearance. Nothing equals well-grown specimens planted in the border of a cool conservatory or carriage court. Good drainage must be afforded, as liberal supplies of moisture are needed, and during growth frequent doses of farmyard liquid. A good holding loam, with a fourth part of peat, leaf-mould, and coarse sand, forms a very suitable medium. Overcrowding must be avoided and moderately hard pruning practised each year, say in January, lessening the water supply at such periods. Few things produce a better effect used for dinner-table decoration. The yellows and whites mixed look charming, as they also do lightly arranged in tall vases or glasses, no other foliage but their own being needed. Plants raised annually are perhaps the best—that is where a good-sized batch is grown in pots. Clean, healthy cuttings strike readily during February. They must be kept as near to the roof-glass as possible, or they soon assume a leggy appearance and become weakly. In June a sheltered position out of doors on a bed of coal ashes in the full sunshine is best, feeding carefully from the time 6-inch pots become well filled with roots. Plants in 6-inch pots are the most useful, and when thus confined, a fifth part worm-free manure should be added. One stopping when from 5 inches to 6 inches of growth have been made is sufficient. Removal under glass should take place at the end of September.—C.

ARRANGEMENT OF STOVE AND GREENHOUSE PLANTS.

DURING the winter months a different arrangement of plants grown in our greenhouses and stoves is more necessary than during the summer. In many instances the roofs of the houses are more or less covered with creepers of various kinds in summer. Not only does this improve the health of these plants, but they throw a slight shade, for which plants of other kinds grown on the stages are grateful. But just now it is important that all the light possible should reach the latter, and it is no longer possible to leave the creepers in position on the roof; indeed, it would not be advisable in all cases, for some stove climbers are very easily injured by cold, and the few inches from the glass are not sufficient to prevent the penetrating influence of severe frosts. I have frequently seen fine plants of *Cissus* discolour lose every leaf from this cause, and *Clerodendrons* are easily injured in the same way.

Where a large number of *Caladiums* and other deciduous plants are grown, the decay of their foliage allows other plants in the same house to be spread out a little and as well make room on the stages for those that have been growing on the roof. *Dipladenias*, *Allamandas*, *Stephanotis*, and similar kinds may have a little of the surplus wood removed and be twined round a few stakes placed in the pots, so that they take up far less room.

One point it is necessary to remember, and that is that as soon as the growing season again commences the plants must again be untied, or in a very short time they will be in a hopeless tangle, and to separate them will mean breaking the shoots. The growth will have become so well ripened, that the position of the plants in winter while at rest is a secondary consideration, and they must make room for such sun-loving subjects as *Ixoras* and *Crotons* in the stove, and *Pelargoniums*, *Cyclamens* and others in the greenhouse. Ferns, again, when grown with other plants like ample light now, and if the collection includes, as it often does, a few of the more generally cultivated Orchids, let these also have the benefit of all the light at command. Plants of a bulbous character that are now resting should not be entirely forgotten, for many of them are the better for the slight amount of moisture, notably such Aroids as *Caladiums*, *Callas* of sorts and others. The plants should be stood where they can be looked over occasionally, and placing them near to hot-water pipes, where they dry up rapidly and suddenly, should be avoided.

GROWER.

THE WEEK'S WORK.

KITCHEN GARDEN.

FORCING RHUBARB.—The earliest stools of Prince Albert and other easily excited sorts which were placed in the Mushroom house the third week in November are now moving into growth and will furnish usable sticks before Christmas. About the 13th of this month place a second similar lot in warmth. A portion of the permanent open-air bed should now be covered, either with proper Rhubarb pots or tubs with the bottoms knocked out. These should then be built round with a sufficient bulk of fermenting material, previously prepared by turning in order that rank steam may escape. Leaves and stable litter in the proportion of three parts litter to one part leaves may be employed. If any fear exists of the supply running short in the ordinary forcing house but where time is not a desideratum, nothing equals a bed of leaves only, as these retain the heat to the last, and weak stalks through excessive heat need not be feared. The best example of forced Rhubarb I ever saw was a good-sized bed of the true Prince Albert. Stout stakes were driven in round each stool so as to form a square; round these hay-bands were closely wound, small lights being laid over each, and Oak and Beech leaves well trodden into the intervening spaces. A little litter was then spread over the whole surface, a few extra forkfuls being laid on the lights. Thus treated the stools could be easily examined at intervals, and when growth was advancing, if the weather was mild, a little air was admitted by moving the lights on one side. A second bed was grown by its side so that they could be forced and rested alternately. This is really the best way of forcing Rhubarb I am acquainted with and good flavour is obtained. A good deal of mischief is wrought by piling up huge mounds of hot stable manure, which often literally stews the crowns before the evil of overheating is discovered. Where it is intended to form a new bed in spring, good-sized healthy pieces having a couple of crowns may be broken off the stools as lifted and laid in leaf-mould in some convenient corner ready for planting in February or March. The sooner the ground is prepared the better, as a good rich root-run is essential and time is necessary to allow the manure mixed in trenching to decompose and the

ground to settle. When the plants are put into newly-dug ground in spring, it often happens that the roots get an insufficient supply of moisture, particularly should the summer be a dry one; consequently, only a poor growth follows. For the sake of quality as well as quantity, a change of ground should be given every five or six years. When extra large sticks are required for exhibition, a thick layer of rich manure should be placed beneath the stools. Liquid manure may also be given with impunity as soon as the plants become established.

CARDOONS.—Where the latest batch of Cardoons is still in the ground they should now be lifted and placed in a cool, dry shed or root-store. Get as much soil as possible to the balls when digging them up. Where room is scarce I have known gardeners keep Cardoons for a considerable time by suspending them from the roof. Provided the winter is mild, they may be left in warm soils if well covered with Bracken, but in damp, low-lying situations they will not stand it, and at any time much wet is liable to ruin the centres. Those already in store must be looked over occasionally, and any that show signs of decay used at once. The root-room generally must likewise be attended to at regular intervals for the same purpose, as it is surprising how quickly decayed roots contaminate the rest.

SWEDS TURNIPS.—Many people do not seem to know the value of these roots for a change in the dining-room; indeed, some people prefer them to white Turnips. It must be remembered, however, that those only from good, rich soil must be selected, and these not too large, or the flavour is apt to be strong. It is fortunate when Swedes are appreciated, as their use prolongs the supply of other vegetables. Where in the southern counties the earliest Rosette Coleworts are showing signs of splitting, they may be kept for some time by lifting with a little soil attached and laying them in a cool, open shed in semi-dry soil. When rain gets into these split heads and frost follows, decay soon sets in. Besides, as soon as they are removed from the ground, the latter can, if need be, be turned up for exposure to frost and wind.

ROUTINE WORK.—In fine, dry weather opportunity should be taken to clear off any exhausted crops and to get the manure wheeled on to all vacant plots at the approach of frost. In cases where the ground will not be dug or trenched for the present it is a good plan to tip the manure in heaps of large dimensions and to throw a little soil over it. This prevents the properties from escaping, and where near the mansion is not so unsightly. Gas-lime may now be safely dug in, not only into plots which are to be sown with Spinach, but also into those to be planted with Cauliflower, Cabbage, Beans—indeed, the whole garden will be benefited by an occasional dose of it to rid it of grubs and purify it generally. Perhaps the most effectual way of applying gas-lime on plots where sowing or planting will not take place till April or May is to turn it up very roughly and then to sprinkle gas-lime somewhat thickly over the surface. It is then gradually washed in by winter rains, and the whole depth of soil gets a more even share of it than when it is dug in at once. After a few dry, windy days get the walks of the kitchen garden swept and rolled again. This will solidify them for the winter, and no more rolling will be needed till spring. In unfavourable weather also shorten stakes which have decayed at the bottom, these being just what one wants for the dwarf Peas on early and second early borders. Pegs and labels either for writing on or numbering may also be made.

J. C.

FRUITS UNDER GLASS.

EARLY PEACHES.—The weather up to now having been so warm and fine, Peach and Nectarine trees which have been forced for early work for years in succession appear almost ready to commence growth, so that with present weather conditions continuing fire-heat will be unnecessary, and all the artificial warmth needed will best be

given by making up a nice bed of the leaves and litter already prepared for such purposes. This bed need not be a big one to commence with unless we get a quick change to frosty nights, and may be added to and turned later on as occasion arises. The aim should be to keep the night temperature down to about 45°, rising to 50° by day without sun-heat and the usual allowance of 10° higher with sun, and on cold nights it will be better to allow a fall to 40° than to raise it higher by firing. Just at present it is impossible to keep houses so low, but it is not the rise given by an abnormally high outside temperature that does harm; the harm comes from high temperatures produced artificially, and there is no doubt that this often occasions a stubborn start and also bud-dropping, though my theory is that bud-dropping is, except to the few varieties with a bad reputation for losing their buds, due principally to dryness at the root in the autumn or early winter. A certain amount of humidity in the atmosphere is necessary to a good start, but this should not be brought about so much by heavy dampings down as by careful manipulation of the ventilators—that is to say, by admitting just sufficient air to keep the atmosphere wholesome without causing sharp draughts. Gently dewing over the trees now and then with the syringe is helpful, and this, with the evaporation from the hotbed, will provide just the amount of atmospheric moisture necessary, provided only a little circulation of air is kept up. To open the ventilators widely enough to set up a strong current of air and then to stop a lot of water about to counteract its drying effects is wrong. Of course, one must be guided in these matters by local influences, as the treatment necessary for low and small houses would hardly be applicable to loftier ones and those which contain much greater cubic space. The conditions advised above should be maintained up to the time the flowers expand, after which a drier atmosphere should be kept up with as free a circulation of air as the outside conditions warrant.

EARLY VINES.—Where there are no pot Vines grown to give the earliest supply of Grapes, it is often necessary to start a house of permanent Vines to produce a crop at the earliest possible time, and though I do not advocate starting houses before Christmas except under such compulsion, very fair Grapes may be grown year after year from Vines started early in December, though the start they get over those which are put to work with the new year is only a question of days rather than weeks when it comes to ripening the crops. The difficulties in early forcing of these permanent Vines are accentuated when one has to depend entirely on outside borders, for these, unless protected in some way, get cold with winter snows and rain. I do not believe in making up a hotbed in the old-fashioned way for such borders, but I certainly believe in the virtues of a good thick covering of leaves (the drier the better) for them, as these will gently ferment and prevent the borders from getting really cold. They also thaw the snow and prevent the water from the latter from reaching the roots in a chilling state. A thin coating of leaves that is anything under a foot thick is practically useless, as it gets sodden long before the weather and the rains get warm, and the covering to do much good should be at least 2 feet in depth. Fortunately, very few people now trust to outside borders alone, for there is one great element of danger in forcing Vines planted outside and brought through holes left in the brick or woodwork, this being that the sap sometimes gets frozen at the collar, this arresting growth and producing disastrous results. To prevent this freezing, either bury the stems with the leaf mulch or bind them round thickly with hay bands, filling up at the same time all crevices round the stem where it is led through to the inside. Inside the house one may make up a gentle hotbed as advised above for Peaches. Insect-infested Vines should have one more weak dressing of Gishurst before starting them, then the house may be shut up and treated generally much the same as the Peach houses,

except that from 5° to 10° more heat may be given. As a guide to the time required, it may be advisable to say that those Vines generally used for forcing will take a little more than five months in which to perfect their crop if started at this season. Syringe the Vines two or three times a day when starting them, but beware of too much moisture later on when growth commences, for an excess of moisture leads to flabbiness of foliage, and this in its turn is a precursor of trouble in the shape of leaves that will not bear the summer sun and which drop prematurely before they have done their season's work of plumping up the buds for another year and bringing the wood to full size and a ripened condition.

STRAWBERRIES.—For very early work I have found no Strawberry to equal the old Vicomtesse Héricart de Thury, which is one of the best for setting and certainly the best early for flavour. Its fruits are not large, but this is no detriment, as all the large varieties are poor when forced so early as this. A batch of plants placed now in a pit on a bed of fermenting leaves, the bottom heat of which is about 75° and the top heat 55°, will come away gradually and well, as the roots will be active before top growth commences, and this will tend towards sturdy spikes of blossoms. The pit should be clean and the glass bright, with the plants set well up to it. Before starting the plants dip them in a solution of weak soft soap and sulphur water to prevent mildew; then, after the surface soil has got dry, ram well to close the soil home to the pots. Syringe daily and fumigate at regular intervals, about twice in three weeks or so, to keep down fly, which prevents the blossoms from opening freely and cripples the foliage.

CORNUBIAN.

ORCHARD AND FRUIT GARDEN.

LATE PEARS.

THE present season has been a peculiar one in many respects, but in none have its effects been more marked than in the ripening of Pears. We have had seasons before when the fruit has ripened prematurely, but I never remember late varieties being in use at this time of the year. In some seasons Hacon's Incomparable, Van Mons Leon Leclerc, Beurré Diel, Passe Colmar, and the like are not ripe till December, and I have had them keep good till January. This season most of them were early in October and none of them remained good to the end of that month, though they were allowed to hang on the trees till the leaves had begun to change colour. Beurré Rance, Easter Beurré, Jean de Witte, Knight's Monarch, Beurré d'Aremberg, Glou Moreau, Josephine de Malines, Ne plus Meuris, and many others of the so-called late varieties have all ripened long before their usual time. There is very little difference in this respect as regards the stock the trees are grafted on, but of the two the fruit from trees on the Pear have ripened the latest. It is rather disappointing, when the fruit is so scarce, to have it ripen at this season, for long before Christmas I shall not have a Pear left. It is not only those that were grown against walls that have behaved thus, but those from pyramids and bushes are alike ripening long before their usual time. In this respect also there is but little difference between young and old trees. We have had two or three very dry summers, which have, no doubt, had a serious effect on the roots of the trees, and this may in some degree account for this premature ripening. Here, during June, July and August, only 2½ inches of rain fell, nearly half of which was on the two first days in July. The fruit, though of fair average size, has not the flavour it would have had provided more moisture had been afforded when swelling should have been

most rapid. During the month of August the ground was very dry, scarcely a particle of moisture in it, and only .37 of an inch of rain fell in this district, scarcely enough to lay the dust, and it was not till the last day in September that the surface had become moist, which was too late to have much effect on the fruit. H. C. P.

Buxted Park, Uckfield, Sussex.

Apple Gascoigne's Seedling.—This is a very fine-looking Apple when the trees can be induced to fruit freely, but I recently noted a nice healthy-looking lot of young trees on which fruit was scarce, and the grower assured me he had taken very little fruit from them, though other kinds had done well. This coincides with my own experience of it, but as my trees are very young I had not expected much fruit. It certainly is not an Apple for restriction treatment, but I am hoping that by giving it its head it will eventually prove fruitful.—H.

The Pershore Plum.—There is probably no more free-fruited variety than this in cultivation, besides which the tree is an excellent grower and does well in many soils where less hardy kinds would not flourish. Cooked it is of most exquisite flavour, the cooking apparently bringing out a richness that is not present in the raw fruit, no matter how well ripened. It and Victoria are two of the freest fruiting Plums known, and both should be profitable kinds to plant. A firm soil is one of the principal requisites in cultivating these and other Plums, and they both do well here on the grass.—SUFFOLK.

Pear Beurre Bosc.—It is not often this Pear is mentioned, but although not one of the choicest as regards flavour, few sorts possess a better constitution or are more suitable for growing in small gardens, as it crops prodigiously. I believe acres of Beurre Bosc are grown in Kent for market, its fine shape, long and tapering, together with the handsome russet skin, commending it for the purpose. Neither is it at all a bad flavoured sort when the trees get plenty of sunshine. I once saw it in grand condition near Melton Mowbray, in Leicestershire, and what pleased me as much as anything was the fact that the soil was very heavy, approaching to clay in fact. It was in bush form and the fruits were heavy and handsome. Amateurs and others possessing small gardens who cannot afford to plant shy or slow-bearing Pears should make room for at least one or two trees of Beurre Bosc when planting.—EAST ANGLIAN.

Pear Hacon's Incomparable.—A short time ago I read a note on this Pear by a gardener residing in the north of England, and was especially interested in his remarks, as I once had two trees on south and south-east walls and was much annoyed at their behaviour. After waiting patiently for, I suppose, six or seven years without a single fruit I destroyed them. Had my garden been of a heavy, clayey nature and growth gross, I should not have wondered so much at their barrenness, but the rooting medium was such that the majority of Pears did remarkably well. The writer of the note in question states that Hacon's Incomparable is a most useful good-flavoured fruit, in use in December, but adds, the tree is many years before it bears fruit. After reading his remarks I almost wished I had not removed the trees, as perhaps a year or two more would have brought them to a permanent fruiting state. There are other sorts which take a long time, and these may be tolerated in large gardens, but where space is limited gardeners are apt to get impatient.—J. B. N.

Apple Bismarck.—"J. G." speaks of this new Apple as having done well this season, and accords it all-round praise. He is fully justified in so doing, as I regard Bismarck as one of the finest and most useful cooking Apples in cultivation. As an exhibition variety it is unsurpassed, having size, symmetry, and colour to recommend it. Bismarck will also hold its own as far as

keeping is concerned against most other varieties in use at the same season. Although not strictly a late-keeping Apple, it comes into use at a most acceptable time of year, viz., after the ordinary run of Codlins is getting past or becoming light in weight and losing flavour. Another important recommendation for Bismarck is its early bearing, quite young trees in any form giving a nice lot of fruit. As a bush or espalier—more particularly the latter—it is a great success, and the market grower also finds it first-rate as a standard. Not a few of the larger cooking Apples, notably Warner's King, Alexander, Peasgood's Nonsuch, and Bramley's, often tire the patience of the grower by the slow rate at which they commence cropping.—GROWER.

Late Figs.—An interesting note recently appeared on Figs for late supply, the writer asserting that they could often be had good late in October. This I have myself proved, but in such cases it is necessary not only to grow them under as cool, airy conditions as possible up to the end of September in ordinary seasons, but also after

Marseilles will be found the best Fig for extra late supplies.—J. C.

APPLE COX'S ORANGE PIPPIN.

This is undoubtedly the finest flavoured Apple grown. This was abundantly shown by the many times it obtained the flavour prize at the Horticultural Society's meetings some years ago. Although opinions are agreed on this point, the same cannot be said as to its hardiness and cropping. In some soils it bears freely, while in others the opposite is the case, more especially in the case of young trees or trees that are pruned yearly. Many growers find it very tender when in bloom. In this garden trees in exposed positions have had their blooms destroyed, while other kinds, such as Prince Albert, Claygate Pearmain, &c., have escaped. This season a bush tree in such a position, 9 feet high and as much through, had not two score of fruit on it, although full of good flowers. Another tree of the same description in a sheltered place had six pecks of splendid highly coloured fruit, and several soakings of manure water brought the fruit up to a large size. Such fruit commands a good price in the market early in the year.

This kind is most frequently seen as a pruned tree. As a standard it has much to recommend it. I have three large trees in this form in our orchard. They are from twenty to thirty years old. In this form they do well, generally producing plenty of bloom, and although they are not favourably placed, as our position is very low, when the season is a late one I generally get a good crop. This year two of the trees had well-nigh all the bloom-buds destroyed by the birds, the third being in a position where they got disturbed by people passing. This tree produced an enormous crop, as is shown by the branch here illustrated. This was cut from the tree about the middle of September. The fruit was of medium size and very highly coloured. I keep these orchard trees regularly thinned. The soil in this orchard is a strong holding loam. As it is close to the river Axe it is often covered with water. Fruit from these orchard trees is not so large as from bush trees in the garden, but it is more highly coloured and has more russet on it. Regarding keeping, I find fruit from



A fruiting branch of Apple Cox's Orange Pippin. From a photograph sent by Mr. J. Crook, Forde Abbey, Chard.

both forms of trees about equal. When stored in close cases or on shelves in a cold, damp fruit room it retains its flavour till well into March. J. CROOK.

Forde Abbey.

Pear Aston Town.—Replying to "B. S. N." (p. 398), there are two different Pears known under the above name. In 1837 I was a lad with my father, then gardener at Beckett's Park, and there two nice trees produced good crops of fine fruit, ripening at the end of September. They were thickly covered with brown russet, suffused with red on the side exposed to the sun, of excellent flavour, and kept fit for use for about a month. At the gardens at Coleshill, Berks, in 1841, I found several trees under that name, the fruits much smaller, paler and more ovate. The fruit was quite worthless, frequently rotting on

that date to apply a genial artificial warmth by means of hot-water pipes. This is necessary to impart flavour. Some sorts, such as Brown Turkey, Osborn's Prolific, the Ischias, and a few others, can, by judgment in starting them for the first crop not too early in the season, be induced to finish off their second lot of fruit at the late period referred to, but I think the finest flavoured October Figs I ever tasted were gathered from a tree of White Marseilles grown in a tub in a cool, somewhat heavily built greenhouse. The tree came into growth very gradually, as no more heat was employed than was absolutely needed to exclude frost; consequently the fruit which was produced on the current year's growth was formed late. The tree was very vigorous, which perhaps accounted for the fact that no fruit ever formed on the extremity of the previous year's wood, but Negro Largo seldom does this. I think White

the trees. As the place was being renovated they were destroyed and I lost sight of the Pear. In 1864, being in charge of a large hop and fruit farm in Kent, I found several trees of both kinds growing and fruiting in the plantation. They ripened at about the same time, but there was little colour on the worthless kind.—RICHARD BUTLER, *St. Dunstan's, Regent's Park.*

Staging white Grapes at shows.—It is an almost universal custom to cover Grape stands with white or pink paper. At the late Chrysanthemum show held at Frome an exhibitor departed from this old custom, and, instead of using the conventional pink tissue paper, chose black velvet plush. The gardener intimated, in response to exclamations from the interested bystanders, that it was his employer's idea, and certainly the colour was enhanced on a black ground over and above that of other exhibits displayed on pink. Black-covered stands, however, are not likely to add to the general effect of the exhibition stages, notwithstanding individual Grape bunches are seen to better advantage. This is the first instance I have seen where such a dark material has been associated with Grapes. There is no reason why it should not have been chosen, especially when it is remembered that similar material is used to display cut flowers in bouquets and other devices, and which it does to undoubted advantage. The beautiful amber tint in the Grapes under notice was more conspicuous than I have ever seen in bunches placed on pink-covered boards.—W.

FRUIT AT NORWICH SHOW.

OF late years East Anglian gardeners have given a good account of themselves at the Crystal Palace and other large shows, therefore I was quite prepared to find a good display in the various fruit classes at the recent Norwich show. It has been said that Norfolk is the home of the Alicante Grape, and certainly some of the finest examples I have seen were produced in that county. The leading exhibits at Norwich were of a high order of merit, size of bunch, berry, and general finish being all that could be desired. I cannot, however, see the use of having a class for Black Hamburgh at November shows, for, as in the Norwich case, the bunches shown are generally inferior and foxy in colour. Of course, the flavour is there, but the show-going public now-a-days expects to see imposing bunches highly finished. I noticed several very creditable lots of Lady Downe's, a Grape which, in spite of the inability of certain growers to master its defects, is invaluable where a late spring supply is desired, as, owing to the thickness of the skin, decay, even in the most unfavourable winter weather, is the exception if ordinary care is taken. What pleased me most were the Apples, the number of dishes, together with the size and finish of the fruit, speaking volumes for the soil, climate, and all-round attention the trees had received. Cox's Orange I never saw finer or more richly coloured, and it was highly gratifying to me to see plates of such neglected but delicious varieties as Margil, American Mother, Lemon Pippin, and Lord Burleigh. I used to see the last shown well years ago at Lincoln, the soil in that neighbourhood suiting the more capricious Apples. In a trade collection I noticed Cornish Gillyflower in addition to the above, but these small, comparatively unattractive varieties stand little or no chance in competition with the newer, more showy section. What I advocate is a separate class for flavour, say six dishes and one dish. This would, I am sure, bring a keen competition and prove of great service to intending planters. Nearly all of these so-called capricious Apples may be successfully grown by working them on the Paradise, planting in a non-clay soil in a somewhat elevated border in which the usual correctives, such as ground mortar rubble, burnt garden refuse, and charcoal, abound. No Apples give such satisfaction in the dessert. Another thing I noticed at Norwich was that the flat, indented varieties, both in the dessert and cook-

ing section, were, except in a few instances, superseded by the deeper or more conical sorts. The marketable and dessert or cooking qualities may be all that is desirable, but exhibitors should not include too many of them in their collections. Notable amongst this class are Baumann's Red Reinette, Court pendu Plat, Fearn's Pippin (a certain-cropping and very valuable Apple), Cox's Pomona, and The Queen. The Blenheims were, except in one or two dishes, undersized and lacking colour. Probably the fruit was taken from young trees. By far the largest and best are produced by aged trees, everyone knowing that the Blenheim is slow in commencing to bear. Bismarck was poorly represented, few trees at present probably having been planted in that quarter. I know of no cooking Apple which bears in a younger state. I saw several dishes of what, though possibly a very old variety, was quite new to me, viz., Nutmeg Pippin, a small, somewhat conical, dingy-coloured Apple. Perhaps some reader can give an account of it. Another discarded Apple was well shown; I refer to Lemon Pippin. I suppose this is not now planted in one garden out of ten. Why, I know not. It yields abundantly, being most useful at and after Christmas, and preferred by some to any other for mincemeat. Some years ago fine old trees existed about Bromley in Kent. I do not think it appreciates a cold soil.

Coming to Pears, had I been asked to choose one of Mr. Allan's first prize six dishes I would, having quality in view, have selected Passe Colmar. By many it would have been regarded as the weakest because the smallest dish, but an expert knows what is beneath the skin. By the way, why not, as I have suggested with dessert Apples, have a class where such sterling flavoured sorts as Thompson's, Passe Colmar, Doyenné du Comice, and others could hold their own? While inspecting the stewing Pears a gentleman intimated to me that he was afraid this class was not sufficiently appreciated, and I quite agreed with him that few things are more delicious than a dish of properly stewed Catillac. The fruit is best when placed in a syrup in a jar, and covered down, in a not too fierce oven. NORWICH.

STONE VERSUS BRICK WALLS.

MOST gardeners know that the worst form of wall to deal with for fruit growing is one built of stone, particularly limestone. Stone was more extensively used in the construction of walls in country districts in olden days than at the present time. Such walls are very difficult to train trees to, particularly when the trees are fastened by means of the time-honoured shreds and nails, because, the stones being of varying thicknesses, the courses are so irregular that it is well-nigh impossible to make good work in the training. The best way to deal with such walls is to wire them, fixing the wires so that there is just room enough to pass the tying material conveniently round the wire. If this is done, there is but little space between the trees and the face of the wall, and the objection raised by many to the draught caused when the wires are some little distance from the wall is then done away with. Another thing which tells against a stone wall is the fact of its being so much colder than one constructed of brick. Sandstone is not so cold as limestone, it is true, but neither is so suitable nor so capable of absorbing and giving out heat as are bricks. I know a garden where some Peach trees were planted against a stone wall, and in spite of the border being carefully made and the trees receiving every attention afterwards they were a failure, yet when a fresh lot was planted in another part of the garden against a brick wall having exactly the same aspect, they succeeded remarkably well. When dealing with a wall of this description a few years ago I was puzzled to know what to do to render it less cold, not only in appearance but in reality, and after thinking the matter over I decided to colour it. In a large tub a sufficient quantity of lime was slaked to yield enough wash when

diluted with water to wash the face of the wall. Venetian red was then added to render the wash, when dry, the colour of a new brick. This was applied with whitewash brushes, and was well worked into the joints and crannies of the wall, the trees being unloosened for the time being. There was a wonderful improvement in the general health of the trees the first year, and they have since succeeded so well that the wall is now kept coloured. The colouring, if mixed and applied in the manner described, lasts a long time, or only requires to be done about once in every seven years. It is a cheap and effectual way of dealing with cold stone walls when they have to be utilised for the growing of fruit, and if the mixing of the wash is carefully done and not made of too glaring a colour, it greatly adds to their appearance as well as rendering them of greater utility. A. W.

CAPRICIOUS PEARS.

AMATEURS frequently err in planting Pears for which the soil and situation of their gardens are not at all suitable. Happily, there is a good assortment possessing such hardy constitutions, that they can hardly be planted in the wrong place, nor can the soil well be too heavy provided it is not actually stagnant. Glou Morceau is free and fertile enough when its roots are working in a warm loamy compost, but I have found it one of the worst sorts for strong loams resting on a clayey bottom. A neighbour of mine had such a garden lying low, and he could not induce Glou Morceau to do well for long together. The fruit was small, and in wet, sunless seasons much cracked. In my own garden two miles away, and consisting of a light open soil in a somewhat high-lying position, the same Pear grew to perfection. Winter Nelis has similar likes and dislikes, a cold, retentive root-run usually producing undersized, cracked fruit. Some of the best looking and most highly flavoured fruit of this the last-named conditions. In the neighbour's garden referred to Thomson's was a special favourite, but though considerable pains were delicious Pear I have seen were from trees growing in a sandy, not very deep soil. As a rule, the flavour of fruit from such a medium is far superior to that from trees growing in strong soils. The delicious Thomson's is another somewhat capricious variety, and succeeds best under taken with it, it seldom produced fruit of good all-round quality. Sometimes amateurs are induced to plant Beurré Rance, hoping to have ripe Pears in February and March, but unless the root-run is warm and thoroughly well drained and the position either a west or southern one, small, inferior, and often cracked fruit will be the result. Baron de Melo is not at home in all soils, and I confess I have never been able to make much headway with it. Cracking was its chief fault when I grew it as an espalier. It should have a wall and a warm, sweet, well-drained border. It is then a good dessert Pear of handsome russet appearance. Of course, where labour and material are at command much may be done to ensure success with these capricious varieties by raising the border and incorporating therewith a good percentage of light loamy material together with abundance of opening material, such as wood ashes and old mortar or plaster refuse. EAST ANGLIAN.

Keeping late Grapes in winter.—Many gardeners are somewhat handicapped in keeping their late Grapes when cut from the Vines in December or January in order that the latter may be pruned, as they have no proper place for standing the bottles after the bunches are placed in them. I have known gardeners obliged to stand them on boards or brick-kerbs in airy vineries, and although they have kept well enough for a time, partial shrivelling eventually occurred. A plan I once adopted with perfect success was to lay a number of Mangold roots on a fruit room shelf close to the edge, the turned-up portion of the latter keeping the roots in position. The bunches with the usual length of lateral attached were then taken

to the fruit room as cut, the lateral being thrust into the Mangold. Each bunch hung down over the edge of the shelf and could easily be examined for bad berries. The berries remained plump and sound for a considerable time. I once kept some late Plums in the same way until the middle of November. A portion of wood was detached with the Plums hanging on it and thrust into the Mangold.—C. N. N.

Root-pruning.—Excellent advice is given, both by Mr. Prinsep (p. 369) and "A. W., Stoke Edith" (p. 411) on that most necessary operation, root-pruning, without which it is absolutely impossible to keep young and vigorous trees in a fruitful state. This is the more often necessary in land of good depth, and which has a sand or clay bed beneath it. Both are very alluring to tree-roots, and no matter how good or how well cultivated the surface may be, they are sure to find their way into it more or less deeply, unless checked by root-pruning. Much disappointment comes from fruit-tree cultivation if this work is

attention in winter, and, as "A. W." points out, the earlier this is carried out the better. It is best done as soon as the leaves fall, but it is not always convenient then to carry it out, and it is better to do it late in winter than not to do it at all.—W. S.

TREES AND SHRUBS.

TAMARISKS.

(TAMARIX.)

AMONG hardy shrubs the Tamarisks are remarkably distinct in the peculiar feathery character of the growth. No other woody plants we can grow outside are capable of producing quite the same effect as they do, an effect of which some indication is afforded by the accompanying illustration. Of all the shrubs that can be grown close to the sea there is none so useful as

driven into the ground will root pretty much the same as Willows do under similar circumstances. Although often described as semi-evergreen, they are, except possibly in the extreme south and south-west, deciduous, shedding not only the leaves, but the smaller branches as well.

To judge by the number of names that appear in catalogues, one might conclude that there were somewhere about a dozen hardy species in cultivation. As a matter of fact, there appear to be about five true species of *Tamarix* and one of *Myricaria* (a very closely allied genus) at present grown here. The *Myricaria* is often called *Tamarix germanica*. The leaves of all the species are minute and scale-like and the flowers are produced in small spikes.

T. chinensis is a comparatively new introduction, and has been distributed from some nurseries as *T. japonica plumosa*. It is not quite so



The Tamarisk at Kew. From a photograph by G. Champion.

neglected. With large trees it is by no means a light undertaking. It is useless digging an open trench around the tree unless deep burrowing roots are searched for, and severed immediately beneath the stem. It often happens that a straight tap-root descends directly from the bole of the tree and assumes large dimensions, and, unless this is cut through, no good comes from the pruning of the other roots in checking the excess of vigour. Hard pruning aggravates this tendency, and, if continuously practised, fruit is and may be looked for in vain. Such trees may bear if the vigorous leading shoots are not shortened in the winter, but the head simply thinned to admit the sun. Apples, more particularly the large cooking varieties, keep badly when the trees have their roots deeply embedded in the subsoil, and the size and quality of Pears are not equal to those of those produced from trees whose roots are nearer the surface. Generally in gardens of large or small size in which fruit trees are grown there are found some, if only a very few, that need root

the Tamarisk. Exposed even to the fiercest gales it thrives, provided the winters are not too severe. The common Tamarisk (*T. gallica*) can no doubt be cultivated well to the north of Britain, especially near the sea on the western side, but it is undoubtedly seen at its best in the south-west of England and in localities with similar climatic conditions. I know of no place where it is used so extensively as at Abbotsbury, in Dorsetshire. Here it is not only grouped in various places in the garden, but there is a long avenue of it leading to the house. This avenue was very charming when I saw it in September, but must have been doubly so when in flower a month or two earlier.

Provided they have a deep, moist, not too clayey a soil, the Tamarisks thrive admirably in the south of England, whether near the sea or not. They are very easily propagated by cuttings. Stout stakes cut from *T. gallica* and

hardy as *T. gallica*, although allied to that species. It is the plant that fills the foreground on the right hand side of the illustration. It has very plumose branches, and is the most graceful of these hardy Tamarisks. The flowers are pink.

***T. gallica*.**—This, the common Tamarisk, is found wild on the south-west coast of England, in France, North Africa, &c. It is a shrub 5 feet to 10 feet high, or a small tree 20 feet high. The flowers are pale pink, and borne on short cylindrical spikes in summer. *T. anglica* is one of the numerous forms of this species, which vary in stature and to some extent in hardiness according to the climate of which they are native. *T. africana* and *T. algeriensis* are names that have been given to the African forms of the species. The "Treasury of Botany" gives the following interesting information in regard to this shrub:—

The stems and leaves abound in sulphate of soda, and it produces in Arabia a substance considered by the Bedouins a great dainty, and called by them "mann" or "manna" from its outward resemblance

to the manna of Scripture. In the month of June it drops from the branches upon the fallen twigs and leaves, which always cover the ground beneath the tree, and, being collected and cleaned, is eaten with bread. Some travellers suppose this substance to be not an exudation from the tree, but the produce of an insect that infests the Tamarisk.

T. hispida (syn., *T. kaschgarica*).—According to M. V. Lemoine, of Nancy, who has been distributing this new species during the last few years, it was discovered by Roborowsky in Central Asia. Its introduction to this country is too recent for much to be said as to its value. It is certainly distinct, the foliage being of a very glaucous hue. "The leaves are very small and imbricated on the stem after the fashion of *Veronica lycopodioides*, and its inflorescences are of a rosy carmine, brighter than in the other species in cultivation" (Lemoine). It flowers in autumn.

T. tetrandra is very like *T. gallica* in general appearance, but, as the name implies, it is distinguished by having four instead of five anthers. It is quite hardy, growing and flowering freely near London. The flowers are pinkish white. A native of the Caucasus.

Myricaria germanica is very nearly allied to *Tamarix*, and often figures in nursery catalogues under the latter name. It differs in having ten stamens to each flower. The branches are erect, rather sturdier than in the true *Tamarisks*, and the leaves are of a pale glaucous hue. The flowers are white or rosy and appear in June. It is a native of various parts of Europe and Asia, and, although not wild in Britain, has been in cultivation here for more than 300 years.

W. J. B.

Caryopteris mastacanthus albus.—The typical *Caryopteris mastacanthus*, with its pale blue blossoms, has attracted an unusual amount of attention during the present season, as the hot weather we experienced throughout the summer was particularly favourable for the production of its pretty flowers. Now Messrs. Veitch announce a white-flowered variety, which will doubtless be considerably sought after. The two or three mild winters we have had have been favourable to this *Caryopteris*, as it is not very hardy.—T.

Abutilon vexillarium.—This occurs among the ornamental shrubs of October on p. 402, but it is only in the favoured South Devon climate that it can be looked upon as hardy, though it is certainly less tender than was at one time supposed, for it used to be regarded as a climber for the stove or warm greenhouse. The specimen from which the drawing was made for the coloured plate in *THE GARDEN* (now nearly ten years ago) is still at Kew on the low south wall of the economic house, and though somewhat curtailed to what it was at one time, yet in the middle of November there were many expanded blossoms still upon it. The bright yellow petals of the freshly-opened flowers stood out very conspicuously from the red inflated calyces, thus forming a cheerful picture during a dull autumn day. Considering that this *Abutilon* is a native of Rio, it is strange that it should prove so hardy in this country.—H. P.

Yew tree poisoning.—A case similar to that recorded by Mr. Ryder happened here last year, when a young and valuable horse died from eating but a few shoots that he cropped off a stunted Yew bush growing in a clump of shrubs. In trying to reach the Yew the horse broke the top wire of the fence, but after all it only ate about half a dozen pieces altogether. Death took place soon afterwards—in fact, almost before anyone was aware that the horse was ill. I always make a point of having Yews cut well back every now and then in the shrubberies at the points where there is any likelihood of cattle being able to reach over the fence, and this precautionary measure prevents accidents occurring. There is no antidote to Yew poisoning, but some hold the opinion that if the animal, whatever it may be, is prevented from drinking water for some few hours after eating the Yew it takes no harm, but I cannot verify this.—A. W.

ORCHIDS.

COCHLIODAS.

This is not a large genus and some of the few species included in it are not at all well known, but most of them are extremely pretty plants and often give a welcome bit of colour when little else is in flower. They all belong to the cool section and, like the New Grenadan *Odontoglossums*, are not at all satisfactory unless carefully treated. They are all dwarf pseudo-bulbous epiphytes, and under cultivation are not happy unless the roots have something tangible to take hold of. In the middle of a large pot or basket they are lost and will never be satisfactory, but when the roots are almost crowded in, and each one can reach the sides of whatever the plants are growing in, then they can be freely watered and the plants will be satisfactory. Air and light are very necessary to their well-being, so much so that our long dark winters make their culture very difficult unless the houses are kept clean and the plants well up to the light. In summer when the sun is strong and powerful the conditions must be quite reversed and heavy shading and frequent damping must be allowed. By this means only can the temperature be kept sufficiently low. It is not always easy to do so even with all our care, but let the house be pleasantly cool and the plants be placed in such a position that they get the full advantage of the ventilation, and they will usually thrive. In almost every detail of compost and watering the culture is the same as for the *Odontoglossums* above referred to, and anyone successful with these may take up the culture of *Cochliodas*. The best-known kinds are:—

C. Noezliana, one of the most recently introduced and a showy and pretty species. The flower-spikes are semi-pendulous and many-flowered, the individual blossoms about an inch across, bright orange-scarlet, with a yellow centre to the lip. This was introduced to this country by Messrs. Charlesworth and Co. in 1891.

C. rosea is often labelled *Odontoglossum roseum* and bears shorter racemes of smaller blossoms, the colour being a bright rosy carmine. It is not a good grower, and though discovered by Hartweg in Peru as far back as 1840 it was not introduced to this country until 1866, when it was imported by Messrs. Backhouse and Co. The same firm was instrumental in the introduction of

C. sanguinea, a showy and useful species that is not so common in Orchid collections as it used to be. The longer racemes of flowers are of a delicate rosy pink shade.

C. vulcanica is one of the best, and has shining rose-coloured flowers produced on racemes about a foot in length. It is a native of Ecuador, long known to botanists, but only introduced to British gardens in 1872.

H. R.

Cymbidium Traceyanum.—About the beauty of this Orchid there can be no question, and it is now getting quite plentiful and cheap, so it is bound in time to take its place as a popular kind. I recently noted an immense plant of it imported as *C. Lowianum*, of which the owner was naturally not a little proud. Its culture is equally as easy as that of *C. Lowianum*, and the roots delight in a substantial compost of loam, peat fibre and Sphagnum in about equal proportions. The plants should be given ample room in the pots and be grown in a cool, moist and shady house, this suiting them much better than a strong heat. Although the flowers are large and lasting, no harm accrues to the plants by their being allowed to remain, always provided the latter are healthy and well established.

Phaius grandifolius.—This, often grown in places where no Orchid collection, as usu-

ally understood, exists, thrives quite well in an ordinary plant stove. The earliest plants are now in flower; indeed, it is in bloom more or less for half the year at least where a number of plants are grown. On strong plants the spikes are over a yard high and the individual flowers are 4 inches across, white externally, reddish-brown within. Good fibrous loam with its equal bulk in peat and a little chopped Sphagnum make a good compost, a liberal sprinkling of crock dust and finely-broken charcoal being added, as well as some rough lumps, to ensure aeration of the bulk. A stove temperature all the year round and plenty of atmospheric moisture are necessary, and the young growths should be thinned a little when the plants are starting.

Zygopetalum Mackayi.—The large and sweetly-scented blossoms of this species look very pretty when associated with those of *Calanthe Veitchii*, and both, being easily-grown, free-flowering kinds, may be had in quantity for a mid-winter display. The plant likes plenty of root room and a substantial compost in which good fibrous loam forms a part, this being more lasting than peat-fibre, and therefore requiring less frequent renewal. As the roots of this species greatly dislike being disturbed, this is a very marked advantage, and the vigour of the specimens is kept up by top-dressing and ample moisture supplies. As the spikes usually appear in the forming bulbs, no distinct resting season can be arranged, but there is usually a little steadying up after the bulbs are complete. Fine specimens of this Orchid with a dozen or more spikes of flowers make a magnificent show at this dull time of year.

Ornithocephalus grandiflorus.—This, the only species in the genus in general cultivation, is an extremely pretty Orchid, bearing arching, many-flowered spikes of yellowish flowers of very peculiar formation. The habit of the plant is a fair guide as to its requirements under cultivation, most dwarf plants like it preferring a light position and not too large a rooting space. Small wood baskets suspended from the roof of a house kept at a rather higher temperature than the cool house suit it well, and as the plant has very small pseudo-bulbs in comparison to its size, the water supply should be kept going more or less all the year round, a slightly drier atmosphere usually sufficing for the resting season. The roots are not particularly strong, so it is necessary to keep the compost fairly thin and the opening material should be in small rather than large lumps.

Cattleya citrina.—It is not often this pretty species is seen in flower at this time of year, but I noted a nice plant of it during the week. The flowers and habit of *C. citrina* are so distinct from those of all other *Cattleyas* that anyone unacquainted with it would have a difficulty in saying to what genus it belonged. It is a delightful plant, and the pity is that so few can be said to be really successful in its culture. In the *Cattleya* house under similar conditions to the *labiata* and other forms it would not be a success, and its natural habit of growing apparently upside down must be respected and provided for. The temperature of the cool house suits it best, and the likeliest method to grow it successfully is to place it on rather bare trellised rafts, with the points of the growths looking downwards, this being evidently a natural means of protection to the centres of the young growths from damp. *C. citrina* usually begins to grow when other Orchids are resting, so that from the time the flowers are past in summer until the growth is again on the move the plants ought to be kept rather on the dry side. New, sweet material should as often as necessary be packed around the bulbs without disturbing the roots, equal parts of peat fibre and Sphagnum Moss being suitable.—H. R.

NOTES AND QUESTIONS.—ORCHIDS.

Cœlogyne speciosa.—This is one of the most distinct *Cœlogyne*s and a very interesting and beautiful plant. The flowers occur a few together, and are

remarkable for the beautiful crest on the lip. They are large, and light brown on the sepals and petals. The plants should be allowed more warmth and atmospheric moisture than most of the *Coleogynes*, thriving well in a full Cattleya temperature with plenty of moisture all the year round. It is a native of Java, where it grows at a considerable elevation.

Oncidium sarcodes.—I have received a fine form of this from "C. C." for a name. It is one of the best of the yellow *Oncidiums*, bearing fine pendulous or horizontal spikes, the ground colour of the blossoms a bright shining yellow overlaid with deep chestnut markings. It is very free-flowering, and a useful kind deserving of all attention. It does well in baskets or pans in an intermediate house suspended from the roof, the compost consisting of equal parts of peat fibre and Sphagnum. Water must be plentifully supplied as long as root action is brisk.—H. R.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

THE meeting on Tuesday last was held under most disadvantageous conditions, thoroughly typical of London weather at this season of the year. The hall, never too bright and cheerful, was on this occasion dull in the extreme. Why such dreary colours are allowed to preponderate in such a building is quite inexplicable. Instead of dark colours predominating, they should be light, bright, and clear. This, of course, is not under the management or control of the Royal Horticultural Society; if it were so, no time would be lost by the executive in remedying the present dismal appearance of the building.

The show itself was an exceedingly bright and effective one, being only marred by the surroundings already alluded to. As might be expected, the exhibits placed before the floral exceeded those of the two other committees. *Chrysanthemums*, as a matter of course, were conspicuous. Of these, a thoroughly representative collection, strong in singles and small flowers of the decorative Japanese section, with not a few excellent examples of the large-flowered varieties, came from Earlswood. A fine selection of singles also came from Altrincham, making a brave show. A well-grown and profusely flowered group of the best kinds of *Bouvardias*, the plants dwarf and sturdy, came from Tunbridge Wells. From Chelsea came a splendid box of the *Jasminiflorum* hybrid *Rhododendrons*; these were most varied in colour, whilst the trusses were large. These are grand flowering plants for the temperate house at this season of the year, whilst their value within the fog radius is also a strong recommendation. A large group of coniferous plants, several of which had been grown within the suburban area, came from Richmond. These, if not so highly coloured or bright as those grown further afield, are, however, the best to choose for smoky districts, being already inured to it. *Begonias*, chiefly *Gloire de Lorraine*, came from two sources, both north and south of the metropolis. This variety beyond any question is of the utmost value for winter decoration. A large and varied group of *Yuccas*, remarkable alike for variety and sturdy growth, was also noted. The Orchid committee had before them several plants of interest, notably the superb exhibit of *Calanthe* hybrids, most varied and in brilliant colouring, from the Burford Lodge collection. Some excellent examples of *Oncidiums* came from Brussels, the individual blossoms being of unusual size. A few capital hybrid *Cypripediums* were also exhibited, to one of which a first-class certificate was awarded, which of itself is sufficient evidence of its value.

The labours of the fruit committee were not in any sense laborious. Of *Tomatoes*, some very finely grown examples came from Reading, better than which no one could possibly desire even in the summer season, being well coloured and of good average size. Neither *Apples* nor *Pears* were in strong force by any means, but of *Grapes* there were some well-finished examples both black and white. At this season of the year it

would not be at all an inappropriate innovation if some well-trained examples of fruit trees were sent to these meetings with a lecture upon the various methods of training in force in this country and upon the Continent too.

Orchid Committee.

First-class certificates were awarded to the following:—

CYPRIPIEDUM HERA VAR. EURYADES.—The top part of the dorsal sepal is white suffused with deep purple, the central portion covered with large rich purple spots with some smaller ones towards the margin. At the base the spottings are deep brown; the petals are pale green, suffused with brown at the top, spotted on the lower half; the lip deep brown, shading to greenish-yellow. This had previously received an award of merit as *C. Euryades*. It has wonderfully improved. From Sir Trevor Lawrence, Burford, Dorking.

CATLEYA MAGGIE RAPHAEL (*C. aurea* × *C. Trianae*).—The petals are pale yellow with some tracings of purple on the outer edges, the sepals deep yellow, suffused with reddish-purple over the whole surface. The front lobe of the lip is bright purple suffused with crimson-purple through the centre area and the throat, through which there are tracings of yellow lines. It is a distinct hybrid, having the intermediate characteristics of both parents in the flower and habit of growth. From Mr. H. S. Leon, Bletchley Park, Bletchley, by whose gardener, Mr. Hislop, it was raised.

Awards of merit were adjudged to the following:—

SOPHRO CATLEYA CHAMBERLAINIANA (*Sophrontitis grandiflora* × *C. Harrisoniae*).—In this the sepals and petals are deep scarlet-crimson, veined with a tinge of purple; the front lobe and outer margins scarlet, mottled with yellow, the whole of the base yellow. The shape of the lip is that of the *Sophrontitis* parent much enlarged, and it is here it differs from *S.-C. Calypso*. From the Rt. Hon. J. Chamberlain, by whom it was raised.

ONCIDIUM FORBESI MOORTREEKIENSE.—This is a large form of the type, the flowers being 3 inches in diameter and beautifully round in form. The yellow mottling on the margin was in striking contrast to the deep brown of the other portions of the segments. A plant with a thirteen-flowered raceme came from Messrs. Linden, Brussels.

ONCIDIUM VARICOSUM LINDENI.—This is a pretty form of this well-known species. The flowers were smaller than in the variety *O. v. Rogersi*, but the blotch on the disc was larger and of a deep reddish brown, covering the central area. From Messrs. Linden.

CYMBIDIUM LONGIFOLIUM.—The flowers have the intermediate characters between *C. cyperifolium*, *C. Traceyanum*, *C. grandiflorum*, and others of this section. The petals are pale green, longitudinally lined with deep brown; the lip white, with a few brown spots and a line in the centre; the side lobes veined with reddish brown. The cut spike carried eleven flowers. From Mr. J. S. Moss, Winter's Hill, Bishop's Waltham.

Sir T. Lawrence sent a large group, the most prominent feature being the fine display of the deciduous section of *Calanthes*. The best varieties among these were *C. Veitchi splendens*, a grand form with rich rose-purple segments and a large white eye on the disc. This was in striking contrast to the white variety, *C. V. lactea*. Another dark variety was the lovely *C. burfordensis*, distinct both in colour and the shape of the flowers from the *Veitchi* section. *C. Victoria Regina* is a fine variety with white and pale rose flowers. These contrasted well arranged between the dark forms. *C. bella* has deep rose flowers, with a white band around the dark purple disc. In *C. versicolor* the sepals and petals are pure white, the lip white, suffused with rosy pink in front of the bright yellow disc. *C. Bryan* with its white flowers stained with deep crimson on the disc is a bold form, remarkably free in habit. *C. revertans* is a dark form of the *C. Veitchi* section. *C. Clive* is a dark variety, with a white disc on the lip. *C. wylamensis* is a white form, with a small purple disc. *C. nivea* has pure white

flowers, except the yellow on the disc. *C. amabilis* is a beautiful pale lilac form with compact spikes. Other Orchids included were a finely grown plant of *Cypripedium Spicerianum* carrying fifteen flowers. The lovely dark *Cypripedium Statterianum* (*C. vexillarium* × *C. Spicerianum*) was also included; also a well-grown plant of *C. Fowlerianum*, differing from the original form, and more nearly resembling *C. Chapmani*. The lovely *Dendrobium cymbidioides*, with its raceme of white and brown flowers, was well represented. *Vanda Sanderiana* was shown in a cut spike of ten highly coloured flowers. *Odontoglossum blandum* was well represented by two racemes of flower. *Oncidium cucullatum*, *Masdevallia hieroglyphica*, *Cirrhopetalum Lowi*, and other botanical Orchids were included. A silver Flora medal was awarded. Mr. J. S. Moss sent a cut spike of one of the darkest forms of *Cymbidium Traceyanum* we have seen. Mr. J. W. Thornton showed a pretty form of *Cattleya Euphrasia*, the sepals and petals pale lilac, the whole of the front lobe and margins of the side lobes rich crimson-purple with prominent white and yellow veins through the throat. Mr. R. J. Measures sent a variety of *Cypripedium Leeanum* of the *C.-L. giganteum* section with seven flowers. Mr. H. F. Leon showed *Cattleya Preciosa* var. *Hislopi*, the sepals and petals pale lilac, the front lobe of the lip rosy lilac, mottled and suffused with deep crimson. The white and purple lines characteristic of the *C. Luddemanniana* parent are very pronounced in the throat. The Rt. Hon. J. Chamberlain sent *Cattleya Mrs. Endicott* (*C. Loddigesi* × *C. maxima*), the lip having the veinings of *C. maxima* with some yellow at the base, with the intermediate characters of the two parents in the habit of growth. The Hon. Mrs. Albert Brassey sent six finely grown plants of *Calanthe Veitchi* and three plants each of the lovely *Calanthe vestita rubra* and *C. v. r. luteo-oculata*, the whole showing good culture. Mr. Leopold de Rothschild, Gunnersbury House, showed three cut flowers of the white *C. Harrisoniae candida*.

L'Horticole Coloniale, Ltd., Brussels, showed in addition to the form certificated five other varieties of *Oncidium Forbesi* and *O. varicosum Rogersi*, very poorly coloured on the disc. Mr. J. McBean, Cooksbridge, sent a very finely spotted yellow ground form of *Odontoglossum Andersonianum*. Mr. H. A. Tracy sent a pale, but large-flowered variety of *Cymbidium Traceyanum*. M. C. Vuylsteke, Ghent, had two of his hybrid *Odontoglossums*, *O. crispo-Harryanum* and *O. Harryano-crispum*, which had been previously certificated. They partake of the intermediate characteristics of the parent species, from which the names are derived, both in growth and also in the flowers. Messrs. J. Veitch and Sons sent a good form of *Cypripedium Minos*, a beautiful secondary hybrid, in which the influence of *C. Fairrieanum* can be plainly discerned. Messrs. F. Sander and Co. sent a small group consisting principally of Orchids of botanical interest and a few hybrids. *Phalanopsis Sanderiana*, with its deep rose flowers, was very attractive. A good plant of *Cattleya exoniensis* with two flowers and *Laelio-Cattleya Wilsoniae*, the sepals and petals deep rose, the front lobe of the lip rich crimson-purple, with the purple lines through the throat, were also shown.

At the commencement of the business of the Orchid committee, the chairman (Mr. H. J. Veitch) drew the attention of the members to the sad loss the committee had sustained in the death of Mr. W. H. Protheroe (head of the firm of Messrs. Protheroe and Morris), Mr. Veitch pointing out the many useful services Mr. Protheroe had rendered to horticulture in general and also to the genial and kind-hearted manner always so readily displayed, and which endeared him to all who were brought into contact with him. Mr. Veitch also pointed out that this is the third loss the Orchid committee had sustained within the last few months—Major Mason, Mr. Sidney Courtauld and Mr. Protheroe. So sad an experience was without parallel since the Orchid com-

mittee had been established. It was decided that a vote of sympathy and condolence should be conveyed to the widow and family of the deceased.

Floral Committee.

The following received the award of merit:—

CHRYSANTHEMUM OSCAR.—This is a single-flowered variety with somewhat short, firm, and sturdy petals, the colour a bronzy orange-red. From Messrs. W. Clibran and Sons, Altrincham, Cheshire.

CHRYSANTHEMUM MME. R. CADBURY.—Notwithstanding pure white kinds are now numerous, this latest addition will be warmly welcomed. It is quite snow-white, the blossoms as a whole exceedingly full, the florets in their imbricate character drooping over each other from a slightly flat summit. The purity, the great substance of the florets generally, and strong, self-supporting peduncle are noteworthy. From Mr. H. Weeks, Thrumpton Hall, Derby.

Wretched weather and counter attractions elsewhere notwithstanding, the Drill Hall contained quite a good representative display on this occasion, among these a capital assortment of well-grown shrubs from Mr. John Russell, Richmond, occupying the floor in the centre of the hall. Of sombre hue generally, the greater sombreness of the surroundings and, not least, the ever-present fog prevented these being seen to advantage. In the way they were arranged, however, it was possible to see every one. The examples were also of good size, compact and well grown, particularly so if the plants had been grown as shown and to their present dimensions at Richmond. This much, which was not stated, is of importance to planters of such things, because it reveals what may be accomplished in a district naturally low and suffering from fog and smoke. Some of the most noticeable were the various forms of *Retinospora*, *R. filifera*, *R. plumosa*, *R. pisifera*, *R. squarrosa*, and the golden forms also of the two middle sorts. *Taxus Dovastonii aurea pendula*, *T. baccata erecta picta*, *T. fastigiata aurea* were in nice plants, and *Picea Parryana glauca* showed well its fine character. *Juniperus japonica aurea* and *J. sinensis aurea* were as usual very pleasing, while the varying *Cypresses* were not least in adding their value to the whole group. From the same source came a fine lot of *Yuccas*, medium and small-sized plants being mostly shown. These included *Y. aloifolia variegata*, *Y. flaccida*, *Y. stricta*, *Y. elegantissima variegata*, *Y. plicata* and *Y. monstrosa*, the last bearing a strong resemblance to *Y. gloriosa glauca*, a very fine and by no means common plant. These *Yuccas* attracted a good deal of notice, due largely to their rare appearance at these meetings. A silver-gilt Flora medal was awarded. The Messrs. B. S. Williams and Son, Upper Holloway, and J. Peed and Sons, Roupell Park Nurseries, each had a group of the well-known *Begonia Gloire de Lorraine*, the plants in the former being fine bushes smothered with buds and blossoms, though it was evident the great enemy, fog, had visited them. The plants from Messrs. Peed and Sons were of varying sizes, much smaller than in the previous lot, and had escaped the bad influences of the fog. Small Ferns were used among the plants generally. A group of *Cyclamen* from Messrs. Low and Co., Enfield, occupying two sides of a table at one end, attracted some attention by the size and vigour as well as the freedom of flowering. Some pure white kinds were very charming, the segments being of more than usual length. The feathered strain was also in evidence, and likewise those with fimbriated margin. The palm for beauty, however, is still retained by the best forms of the typical *Cyclamen*. There were at least two hundred—probably many more—of these plants, and these had but just started on their season of flowering, scores of buds being visible just under cover of the thick leathery leafage. This alone is a token of good culture (silver Flora medal). Messrs. Clibran and Sons, Altrincham, Cheshire, had another extensive array of single *Chrysanthemums*, the colours

being much varied. Of these it is not to be expected with the few florets comprising a bloom that they travel well, and for this reason the best side can scarcely be seen after a long journey. As a whole, however, they were showy and pretty in some instances. The following are some of the more distinct: Mrs. Norris, yellow, very nice shade; Nora Davies, a single Source d'Or so far as colour alone is concerned; Oldfield Surprise, white; and Oldfield Gem, orange. Lord Methuen we consider identical with Earlwood Beauty, a fine pure white that gained honours a year ago. It is a very pure flower, and possibly the largest white single yet raised. Amy Fletcher, white, and very free, but not so good in form nor so exceedingly pure as Earlwood Beauty; Mrs. E. Coward, pale orange; Lady Paget, white, tinted rose; and Miss Mabel Pennington, a pretty pink shade, were also included. Silver Banksian medal was awarded. Mr. W. Wells, Redhill, Surrey, also had a group of *Chrysanthemums* in variety, but which would have been better for much more space. Several kinds in this lot were of undoubted merit. Admiral Sir J. T. Symonds, yellow, and nearly single, a very fine mass of bloom, is an invaluable variety for home decoration; Hair Wonder, very fine; Robert Laird, white; François Pilon, a rich yellow Japanese; R. Hooper Pearson, M. Fitzer, a good light yellow; Earlwood Beauty, single white; Mrs. C. Bown, white, with greenish centre, a good decorative sort; Purity, a fine single white; Framfield Beauty, rich crimson; Latrrier, a late-flowering white, broad petals; Mrs. A. E. Stubbs, single white, very pure; Golden Star, soft yellow single; Mr. E. G. Whittle, a rosy pink shade, very pretty and distinct; Toorong, a kind not unlike Globe d'Or, of a crimson-red shade with a pale gold reverse, are but a few in this group taken at random. Others of the spidery section, many good singles, and some excellent blooms of Japanese as well as the Japanese incurved, were also shown. The table was flanked right and left with pot-grown groups of the plants as well (silver Banksian medal). Of more than ordinary interest, and certainly of more than ordinary merit, was the group of *Bouvardias* in pots from Messrs. Cripps and Son, Tunbridge Wells. It cannot, however, be said that the plants occupied a good position, for the floor of the Drill Hall on a dark and dull December day is the least suited to a group of dwarf-flowering pot plants of such as *Bouvardias*. It is not clear either, with so much tabling to spare, why the tables rather than the floor space were not occupied. The plants certainly were well grown for the size of pots, namely, 5-inch, and well flowered, yet we think their merit was not determinable in such a position. The same plants on a table, opened out by small Ferns occupying the interstices, would have revealed the clean and healthy examples they were, and generally have created no mean impression of their importance. Most of the leading varieties, single and double, were shown, the plants bushy, sturdily grown, and abundantly flowered. A bronze Banksian medal was awarded. The Messrs. Veitch and Sons, Ltd., Chelsea, staged a nice assortment of their hybrid *Rhododendrons*, in which some good colours are seen. The yellow sport from *Chrysanthemum Western King*, which is named Genl. Sir W. P. Symonds, was shown by Messrs. F. Robin and Son, Guernsey. The blooms sent were rather small, due probably to an attack of the so-called rust, the colour being the most pale of all yellows—indeed, rather a cream than a yellow. A so-called sport of *Chrysanthemum* from Mr. J. Riddell, gardener to Mr. E. J. Johnstone, Rougham Hall, Bury St. Edmunds, appears to be identical in all ways with Mr. E. G. Whittle, an American variety received a year or two back. As no parent was given of the sport it is possible an error has been made somewhere. A very beautiful lot of double *Violet Marie Louise* in bunches came from Lady Ashburton, The Grange, Alresford, Hants (Mr. D. Allen, gardener), and received a cultural commendation; the colour was very

fine and the blossoms large also. Some two dozen ample bunches of these ever-popular flowers received a good deal of attention.

Fruit Committee.

The exhibits before this body were unusually few. The chief one was a collection of three varieties of Grapes, four bunches of each, two being shown on boards and two on plates in front. The varieties were Mrs. Pearson, very good for that variety; Black Alicante, fair clusters; and very good Gros Colman. A few small *Cocos Weddelliana* were used to dress the collection. This came from Mr. J. Ryder, gardener to the Countess of Limerick, Hawkswick, St. Albans. A small silver medal was awarded. Mr. Notcutt, of Woodbridge, sent a good dish of his stewing Pear, Winter Orange, which received an award of merit in March last. In relation to this Pear and the handsome stewing Pear Double de Guerce, to which an award of merit was made at the previous meeting, Mr. Crowley, the chairman of the committee, who was requested to have both Pears stewed, reported that he had found Winter Orange to be rather gritty and lacking in flavour, whilst the fruits of Double de Guerra had soft, smooth flesh and better flavoured. A good-sized round seedling Apple named King of the Hollow came from Mr. F. M. Bradley, Peterborough. The fruits bore some resemblance to those of Wellington, but the eye was less open. The flesh was soft, but lacked both acidity and flavour. A small conical Apple of no merit sent for name by Mr. Giles, of Reading, was pronounced the Lady's Finger, or a seedling of similar appearance. Messrs. Sutton and Sons, Reading, sent three boxes of gathered fruits of the new Tomato Winter Beauty. Each box contained thirty-five fruits, all of good colour and well ripened. The fruits are at this time of the year rather flatter than in the spring, and, of course, are not quite so large, but are quite devoid of corrugation. A plant 3 feet in height in good fruit, the latest on the clusters promising to be ripe at the end of January, was also shown. This was of the same batch as those from which the fruits were gathered, and was from seed sown at the end of July last. The committee desired to see fruits, if possible, both in January and February, that the winter-cropping qualities of the variety might be fully tested. From the society's gardens, Chiswick, came two bundles of *Salsaf* roots and tops. These were from a sowing made last spring in the usual way. The varieties were the ordinary (the roots large and a good deal forked), the other, Mammoth, having, oddly enough, roots less in size, but straighter and cleaner, presenting an admirable stock. The seed had been supplied by Messrs. Watkins and Simpson, Tavistock Street, Strand.

NATIONAL CHRYSANTHEMUM SOCIETY.

DECEMBER 5, 6, 7.

THE last of the present season's series of shows of this society was held in the Royal Aquarium, Westminster, on the above dates. The competition in most classes was all that could be desired. When viewed from its value as a means of bringing into prominence sorts specially adapted for late display, the present effort cannot be considered a success. A careful survey of the whole of the exhibits showed without a doubt that many of the blooms, bright, pleasing and varied though they were, were varieties similar to those shown a month earlier, and in the present case somewhat out of character. The trade displays and one specially fine group of miscellaneous flowering and fine-foliated plants, arranged in a most artistic manner on the floor of the building, contributed largely to the success of the last of the 1899 series of shows. There were in all twenty-four classes for competition of a varied kind.

OPEN CLASSES.

The leading class for twenty-four Japanese *Chrysanthemums*, not less than eighteen varieties and not more than two of a variety, was contested

by no less than six exhibitors. Those gaining premier honours came from Mr. R. Kenyon, gardener to Mr. A. F. Hills, Monkshaws, Woodford Green, Essex, who had a good all-round lot of flowers, and some particularly good. The best were Julia Scaramanga, a large flower of a bright bronze colour, somewhat uncertain; Joseph Chamberlain, rich crimson; Mons. Chenon de Leche, exhibited in varying colours; Mlle. Gabrielle Dabrie, a lovely Malmaison-pink colour; Mrs. Barkley, the new bright rosy mauve Japanese; Helen Shrimpton, a new rosy crimson with erect petals; Rivers H. Langton, the new yellow sport from Mrs. W. H. Lees; Matthew Hodgson, an invaluable bright reddish crimson flower; Nellie Pockett and Mrs. Geo. Carpenter. Second prize was won by Mr. D. Williams, gardener to the Earl of Faversham, Duncombe Park, Helmsley, York, who had a very bright clean lot of blooms. Only one lot of blooms was set up in the class for twenty-four bunches of Chrysanthemums, any varieties, in which pompons were allowed. We noticed nice flowers of Phœbus, Mme. Carnot, Julia Scaramanga, Mrs. Mease, Chas. Davis, and Graphic. This exhibit contained several bright and pretty flowers of clear and rich colour, but they were badly arranged and the varieties unnamed. This came from Mr. Henry Perkins, gardener to the Honble. W. F. D. Smith, M.P., Greenlands, Henley-on-Thames. No less than five entrants were found in the class for twelve Japanese, distinct, the leading stand containing a fine lot of blooms for so late in the season, and they also were represented by a nice array of colour. This came from Mr. R. C. Notcutt, Broughton Road Nursery, Ipswich, his blooms claiming notice being G. J. Warren, Amiral Avellan, General Roberts, Master H. Tucker, President Bevan, and an example of Mrs. Mease, the primrose sport from Mme. Carnot, but in the present case almost white. Second honours fell to Mr. J. Sandford, gardener to Mr. G. W. Wright-Ingle, North Finchley, N., who had smaller, but clean and pretty blossoms. Mrs. G. W. Palmer, Julia Scaramanga and Mme. Carnot call for notice. The flowers in the class for six blooms Japanese, distinct, were pleasing, those staged by Mr. Henry Perkins being placed first. They included Mary Molyneux, G. J. Warren, and Mrs. Mease. Mr. R. Kenyon was a capital second, the new yellow J. R. Upton, Mrs. Barkley, and Surpasse Amiral standing out conspicuously. The incurred blooms were good, the only class for twelve blooms in not less than six varieties, and not more than two of a variety, bringing out five stands, making a pleasing contrast to the Japanese flowers. A good first was found in Mr. F. King, gardener to Mr. A. F. Perkins, Oak Dene, Holmwood, Surrey, who had a nice lot of blooms for so late in the season, including Miss Phyllis Fowler, a pretty pale yellow; Louisa D. Black, a deeper yellow; The Egyptian, a massive mahogany-coloured flower; C. B. Whitnal, and Bonnie Dundee, orange, shaded rosy bronze. Second prize was awarded to Mr. Thomas Robinson, gardener to Mrs. Lawrence, Elsfeld House, Sittingbourne, whose blooms of King of Orange, Bonnie Dundee, Mlle. Lucie Faure, and Countess of Warwick were conspicuous. The four entries in the class for twelve bunches Japanese, three blooms of a variety in each bunch, made a pleasing display. In this case Mr. Kenyon was again to the fore, showing large blooms of good form and colour, Matthew Hodgson being remarkable for colour. Mr. R. C. Notcutt was second with smaller, though neat and pretty flowers of good colour, Beauty of Thrumpton, a pretty rosy purple; Snowdon, a white with notched petals; Golden Gate, Mrs. Maling Grant, Matthew Hodgson, and Le Grand Dragon calling for notice. The four competitors staging six bunches Japanese made a welcome display. In this case Mr. Perkins was first, and again his exhibit was unnamed. He had, however, good blooms of G. J. Warren, Julia Scaramanga, Mme. Carnot, and Golden Gate, making a bold exhibit. Second honours fell to Mr. J.

Tullett, gardener to Mr. G. Alexander, Warley Lodge, Brentwood, Essex, whose bunches of Vivand Morel, Graphic, and Julia Scaramanga were deserving notice. The singles were charming. The class for six bunches of large-flowered single varieties, six trusses only of one variety in a bunch, not disbudded and distinct, made a very pretty display set up, as they were, loosely in jasper vases. This is a decided improvement on the old method of arranging these in trebles on boards. Mr. J. Tullett was first, showing Effie, Victoria, a lovely creamy primrose; Purity, Miss Brown, Earlswood Glory, and Rudbeckia. Second prize was awarded to Mr. G. W. Forbes, gardener to Mme. Nicols, Regent House, Surbiton. His blooms of Earlswood Beauty, Yellow Giant, John Arters, and Earlswood Glory were excellent. For six bunches small-flowered single varieties there were three exhibitors, and arranged in vases their decorative value was most pronounced. Mr. Tullett again led in this class, showing freely grown, undisbudded sprays of Mrs. D. B. Crane, Nelly, Nora, Mary Anderson, Guernsey Sunset, and Magenta. Mr. G. W. Forbes again followed, his vases of Mrs. Mist (splendid rich colour), Mary Anderson, and Florrie (deep cerise-pink) calling for special mention. A new class for six bunches of decorative, spidery, thread-petalled, plumed, &c., Chrysanthemums in not less than three varieties was represented by one collection only. This was a pretty exhibit, and came from Mr. W. C. Pagram, gardener to Mr. J. Courtenay, The Whins, Weybridge, Surrey. His varieties were King of Plumes, deep yellow, with notched florets; Sam Caswell, a deep pink, with thread-like petals; Mrs. Carter, lovely primrose-yellow, the best of the thread-petalled sorts; Jitsujetui, pink and white, thread-petalled; Cheveux d'Or, golden yellow, and Houpe Fleuri. The decorative exhibits were fairly numerous, and contributed in no mean measure to the interest of the meeting. For a large vase of Chrysanthemums arranged with any kind of foliage, grasses, or berries there were five exhibitors, and these were displayed on a table by themselves. A vase of somewhat poor artistic design, in which the blooms, &c., were very indifferently disposed, secured first prize for Miss C. B. Cole, The Vineyard, Feltham. A superb vase, undoubtedly meriting leading honours, was placed second. This came from Miss Easterbrook, The Briars, Fawkham, Kent, who used freely-grown sprays of Mrs. Filkins, Snowdrop and Primrose League, small-flowered pompons, also using in the most appropriate manner Asparagus with the brightest green tints. The hand-basket of natural autumn berries and foliage was a welcome change. In this case Miss Cole was again placed first, with a very pretty basket arranged in the lightest possible manner. Miss Easterbrook was again placed second, with a basket of berries of a most representative character. The wealth of berries in this case was nothing short of remarkable, and these were deftly associated with foliage, &c., giving a beautiful finish to the whole. The feathery heads of the Traveler's Joy entwined around the handle were distinctly pretty.

AMATEUR CLASSES.—DIVISION A.

There were but two competitors in the class for twelve Japanese blooms distinct, the prizes in this case being offered by Mr. C. W. Richardson and confined to single-handed gardeners. Mr. C. W. Perrin, gardener to the donor of the prizes, Sawbridgeworth, Herts, was placed first for a very nice board of blooms. Simplicity, Graphic, Etoile de Lyon, still a useful flower late in the season; Julia Scaramanga, Australie, Silver King, a coarse flower even at its best; and G. C. Schwabe call for notice. Second prize was awarded to Mr. A. Hoonery, gardener to Mr. G. H. Cox, The Grange, East Barnet, who had smaller blooms and poorer in quality. Mr. W. Perrin again led for twelve Japanese distinct, but in this case with blooms of poorer quality. Graphic was exceptionally good, and others deserving mention were General Roberts, Etoile de Lyon, Joseph Chamberlain, Silver King, and

G. C. Schwabe. Second prize was awarded Mr. Henry Love, 1, Melville Terrace, Sandown, Isle of Wight, for a stand showing a distinct falling off. No less than six entrants for six Japanese blooms distinct were forthcoming. Mr. Pearson was again first with large, clean, and neat flowers, Silver King, Etoile de Lyon, and Graphic being in good form. Second place was awarded Mr. E. Ryman, gardener to Mr. C. Sopper, South Park, Reigate, Surpasse Amiral, Master H. Tucker, and Vivand Morel serving him well. For a large vase of Chrysanthemums, arranged with any kind of foliage and berries, &c., the five competitors made a brave show. A really handsome arrangement of Japanese and incurved flowers associated prettily with Eulalia fronds and Asparagus secured first prize for Mr. H. Pestell, gardener to Mr. F. S. Wigram, Elston, Bedford. There was a blemish, however, in this vase; on one side the finish had been neglected, showing painted-green stick supports. A pleasing combination secured second honours for Mr. F. Bush, gardener to Mr. W. T. Lister, Rose Hill, Totteridge, Herts, who had a large deep blue vase of Japanese flowers, making an artistic combination, sprays of Asparagus Sprengeri giving a neat finish.

AMATEUR CLASSES.—DIVISION B.

These classes were well contested. Six entries for six Japanese blooms, not less than four varieties, found Mr. W. G. Prudden Clark, York Road, Hitchin, leading. His blooms of Vivand Morel, C. W. Richardson, Mrs. Mease and a richly coloured bloom of Charles Davis were his best. Mr. F. Durant, Ware, Herts, was second, a good bloom of General Roberts standing out conspicuously. For six bunches of any varieties, out of five competitors Mr. G. C. Farmer, Leeds Abbey, Maidstone, was first, nice bunches of Mons. Chenon de Leche, La Grand Dragon and Mme. Carnot being noticeable. Mr. W. G. P. Clark was second, Etoile de Lyon serving him well. There was a goodly array of vases in the competition for one large vase of Chrysanthemums. A pretty little vase of medium-sized flowers exhibiting a nice blending of colours and bright green foliage placed Mr. Clark first. A more noble and handsome vase of flowers secured second position for Mr. A. Taylor, 5, Vernon Terrace, East Finchley. The decorative effect was spoilt by the too free use of foliage of too deep a shade of green. For miscellaneous plants there were three classes, but in one instance only was an exhibitor forthcoming. The prizes were good and should have been sufficiently tempting even so late as the present. For a collection of flowering plants, arranged with small Ferns on a table 9 feet by 6 feet, a very beautiful display secured first prize for Mr. David Gibson, gardener to Mr. B. Johnstone, Coombe Cottage, Kingston-on-Thames. In the centre was a huge cone-shaped mound of winter-flowering Begonias, interspersed with Roman Hyacinths. The base of the table was pleasingly arranged with Cyrtipediums and other Orchids in variety, Primulas, Cyclamens, Carnations, Chrysanthemums, Roman Hyacinths, &c., finished with small Cocos Weddelliana and Ferns.

MISCELLANEOUS EXHIBITS.

As usual at this season, these exhibits were numerous. One of the special features of the show was a very large group arranged on the floor of the building, containing Chrysanthemums, Cyclamens of high quality, winter-flowering Begonias, Roman Hyacinths, Calla æthiopica, Heaths, Orchids, superb Poinsettias, each of these arranged in an undulating manner and charmingly set off with Crotons in variety, beautiful examples of Dracena Sanderi, Cocos Weddelliana, and other fine-foliaged plants. An irregular and pleasing front edging of Moss and Panicum variegatum made up a magnificent exhibit which left nothing to be desired, and reflected the highest credit on the exhibitor, Mr. John Fleming, gardener to Sir H. Pigott, Bart., Wexham Park, Slough, Berks, to whom a gold medal was awarded. Gold medals were also

awarded to Mr. Norman Davis, Framfield, Sussex, and Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E. The former used large vases, neat and dainty hand baskets, &c., filled with new and choice sorts. Specially noticeable were King of Plumes, Mignonette, Mrs. Filkins, Tuxedo, Sam Caswell of the decorative sorts, Mme. R. Cadbury, a clear ivory-white, Western King, Mrs. Barkley, and other leading Japanese novelties. Mr. Jones had large vases in variety, huge cornucopia hand-baskets, besides other receptacles, each filled with great taste. Of the newer Japanese sorts we noticed Florence Molyneux, the finest novelty of the season; R. Hooper Pearson, the Buttercup-yellow flower; Mme. Philippe Rivoire, Lewisham Belle, and numerous other good things. A new single named Edith, white, flushed rose, is a fine acquisition. Crotons, Palms, and Begonia Gloire de Lorraine were each pleasingly associated. Messrs. H. Cannell and Sons, Swanley, Kent, as usual, had a magnificent display, embracing no less than sixty-four bunches of their superb zonal Pelargoniums, each of the finest quality. Chrysanthemums of a representative character and winter-flowering Begonias secured for them a silver-gilt medal. From Mr. R. Owen, Maidenhead, came a large table of Chrysanthemums in vases, a huge lyre of artistic merit, and no less than twelve boards of a dozen flowers, embracing new and choice Japanese and incurved varieties (silver medal). Mr. W. J. Godfrey, Exmouth, Devon, also had a large table of Chrysanthemums chiefly of a decorative character. Winter White, King of Plumes, Mrs. Filkins, and Sam Caswell called for mention (small silver medal). Mr. J. Agate, Havant, Hants, staged a dozen flowers of his new white Japanese Florence Molyneux, which called forth much praise, and from Mr. J. Williams, 4A, Oxford Road, Ealing, W., came a most dainty table decoration, in which pink Chrysanthemums were largely used with suitable foliage. These were arranged in his silver-plated rustic ware.

FLORAL COMMITTEE.

First-class certificates were awarded as follows:—

J. R. UPTON.—A very large Japanese variety with long drooping florets of medium width and slightly curling at the tips; colour deep golden yellow. Exhibited by Mr. J. R. Kenyon.

EDITH.—A single variety of large size, having rather broad flat florets; colour deep rosy pink, centre yellow. Shown by Mr. Pagram.

NOTES OF THE WEEK.

Pelargonium Lady Newton.—This is an excellent kind for winter work and quite distinct, the colour of the blossoms being pale salmon with an edge of scarlet, a by no means frequent combination. The variety is likewise very free and the trusses of large size and well filled with large individual blossoms. The clear edge of scarlet is very striking when seen in fair quantity, and is moreover generally decided in its character.

December flowers.—With this I send you a few December flowers. It would be tedious to make a list of all that are still in bloom, but certainly what I send does not comprise one-half of what is even yet in flower, keeping the garden bright and gay, even without the lovely berries of the Pernettyas and similar plants.—A. KINGSMILL, Harrow Weald.

* Among the flowers sent were Arbutus, Ceanothus, Pentstemon, New Zealand Veronica, Wall-flower, Fuchsia, Colchicum, Hellebore, &c.—ED.

Chrysanthemums Snowdrop and Primrose League.—The two charming little pompons, the former white and the latter yellow, are useful late kinds, and just now are at their best. To see them at their best they should not be disbudded. Quite recently I saw a number of blooms of Snowdrop which had been severely disbudded, the charming miniature character of the flowers being thereby lost. The blooms are admirably suited for the smaller receptacles used for indoor decoration.—D. B. C.

Chrysanthemum Western King.—This is valuable as a late kind. Although generally known as

a midseason variety, it has a greater value during the earlier half of December. It is one of the purest white Japanese sorts, and has not been so freely cultivated as it deserves. At the time of writing plants which were propagated during April and May last are now in full bloom. They were potted into 8-inch pots and allowed to make a natural break. Each plant is carrying some six to eight blooms, and the plants are also beautifully dwarf. The variety retains its foliage well.

Chrysanthemum Chatsworth.—Perhaps the most exquisitely finished flower of this variety that has yet appeared was included in the beautiful lot of blooms shown by Mr. N. Davis the other day at the Aquarium winter exhibition. Early blooms of this kind, both last year and again this season, have not been all that could be desired, much less have they approached to catalogue descriptions of the flower. In the instance now referred to the central part was superb, and toning down to a most delicate pink above the reddish shade of the lower florets, together with its fine build and form generally, made it what it was—one of the very finest kinds shown. Usually this variety is not seen of such depth as was noted in this instance.

Basket Begonias.—While much attention is directed to the employment of Begonias as pot plants, for which staking and tying are greater or less degree necessary, it is to be hoped that their value for hanging baskets will not be overlooked. For this purpose in winter no variety is so bright and cheerful as Gloire de Lorraine, with its loose, extended wreaths of blossoms. The variety, too, is especially good when so isolated that no other plant touches it. Even as a pot plant this greatly conduces to the retention of the foliage not only to the pot, but in reality almost clinging to it. For basket work and suspending generally avoid large receptacles, so that a general furnishing of the exterior of the basket will be brought about.

Tanacetum argenteum.—This pretty and compact alpine Tansy is a very continuous bloomer when given a position somewhat raised from the ordinary level and where good drainage is secured. In its day it produces a good white sheet of blossoms, and carpets the earth with a compact silvery patch of leaf growth. The plant is of quite easy culture, the ordinary treatment accorded to such plants suiting it quite well. Loam and leaf soil, the whole made rather gritty, with the addition of old mortar or brick rubbish, are well suited to it, better than the closer class of soils that do not so readily admit of a free passage of moisture. A few days since plants were quite showy, but the last severe frost has crippled it.

Colchicum Sibthorpi.—I have to thank Mr. Kingsmill for writing to tell me that the flowers of Colchicum Sibthorpi, mentioned in THE GARDEN of November 25, were not from plants which had been established. I have now had this fine Meadow Saffron for several years, and I find that it blooms a considerable time before the recently planted corms gave flowers at Harrow Weald. The information kindly given by Mr. Kingsmill may have the effect of preventing any misunderstanding on the part of those who might purchase this noble Meadow Saffron under the impression that it flowers in November. The latest to bloom here is one I have as Decaisnei, but it is far inferior to Sibthorpi in size, colour, and beauty.—S. A.

Aralia Sieboldi variegata in flower.—I have a nice variegated plant, about 4 feet high and 6 feet in diameter, with six spikes, in bloom in the open air here. Eighteen years ago I had a plant too large for the conservatory, and determined to plant it in the open. I chose a place on the east side of a shrubbery and 50 yards from the west side of the house. The soil being London clay, I made a large hole and put in a quantity of brick rubbish, and on this placed about 18 inches of vegetable mould. In this I planted the Aralia in May. It was then 8 feet high. It grew well and flowered each autumn, generally before frost, until the severe frost of 1895, when it was much injured, but recovered.

It has bloomed the last two years, and is well in flower now.—RICHARD BUTLER, St. Dunstan's, Regent's Park.

Saxifraga apiculata.—Though well known as one of the earliest flowering of its race, it is not usual that such flowering begins while the old year is still with us. This is so, however, at the present time, and it may be said, perhaps, unfortunately, as in the event of sharp frosts or even the present wet and frost combined it is not likely the now apparent show of flowering spikes will escape without injury. A slight protection may be of assistance, especially if the protection is afforded in such a way that the head of the plant is kept dry. This may be readily accomplished by a sheet of glass sufficiently large to cover the tuft being raised by strong wire supports, so twisted into shape that the glass may be inserted and thus throw off the rain. Usually, if dry overhead, the frost is not particularly harmful to such things, while the reverse is often attended with bad results.

Galanthus Rachelæ.—Here this Snowdrop has been the pioneer of the genus, although, as mentioned in THE GARDEN of December 2, its flowers soon fell victims to the greed of the slugs. This Snowdrop is considerably earlier than Galanthus Elsäe, which we also owe to Professor Mahaffy, who brought the two from Greece in 1886. It is now some years since Mr. Burbidge kindly sent me a bulb of this rare Snowdrop, but, unfortunately, it shows hardly any increase. Like G. corcyrensis and G. octobrensis, it is rather weak in growth and does not possess the robustness of the common Snowdrop nor even that of its companion, G. Elsäe. I have never been able to get seed from G. Rachelæ, but I have now two seedlings of G. Elsäe which have reached a flowering stage. They will not, however, be open before the end of December if the weather keep open; should frost come they will be later still.—S. ARNOTT, Dumfries, N.B.

Saxifraga Cymbalaria.—Among the few plants which are yet in bloom is the dainty little Saxifraga Cymbalaria, which is also one of the prettiest carpeters of the time. The plants now in flower are the progeny of those which bloomed earlier in the year, but have now been cleared away. They are not flowering so profusely, it is true, as they will do in the coming spring, but one cannot but welcome and enjoy the little golden stars on the close carpet of glossy green leaves. It is almost amazing to see how quickly this Saxifrage increases in favourable soils and positions. Last spring I took a few small plants from another part of the garden and placed them in a shady corner in rather heavy soil. They flowered well, and now the seedlings from them threaten to be too numerous, but will form a carpet I would not like to be without for covering the ground below the bulbous plants which will bloom in spring. I would like to draw the attention of others to this valuable little Rock-foil, so unlike many others.—S. A.

Tulipa Sprengeri.—Admirers of the Tulip would see with pleasure the coloured plate and accompanying notes on this in THE GARDEN of December 2. I am grateful to M. Hoog for the information he gives about it. Perhaps a few words upon it as it behaves in my garden here may be of use to others in the British Isles. It has flowered here for at least two, and I think three, seasons. The first year it came into bloom no later than some of the more tardy Tulips, but this I attribute to its having been ripened off early in a warmer climate. This year, however, it was the latest of all the Tulips. Although, as M. Hoog justly remarks, we need not particularly care for a display of Tulips in June, yet one finds its cups give us a pleasing variety at the time. It is distinct enough and pretty enough to deserve the space it occupies. One thing that I have observed is that it is unusually slow in its progress from the time that it shows its bud until the flower opens. I may mention that I grow Tulipa Sprengeri in light soil and in full sun. It is left in the ground and not lifted and dried off

annually.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

Begonia semperflorens gigantea.—It would appear that very little description is necessary here beyond the descriptive varietal names, but as a fact the plant is so much removed from the smaller-leaved and much more compact typical kind, that some may regard it as not related thereto. Taller in growth, larger and more fleshy leafage, and fewer, if much larger, blossoms, are among the chief characteristics of the giant form. It is, however, so good and distinct in character and so continuous in its flowering, and winter flowering especially, that one may expect good out of it in the endeavour to establish a distinct race of winter-flowering *Begonias*. Despite the fact that already there is tangible proof of securing such a section in one direction, it does not follow that with the fulness of material at disposal in this remarkable genus such a section may be established in one way only, and certainly the *B. semperflorens* would seem almost suggestive of the very work itself. In any case the combination of a third species or kind may enhance the interest, if not the beauty, of such a group the end of which is not yet.

Thin carpets over bulbous plants.—Perhaps one of the most difficult things to obtain quickly is that thin and very desirable carpet over bulb areas that, while affording the needed protection from pelting rains and the like, will not become sufficiently dense to choke the plants as they try to emerge therefrom or to form a nesting place for slugs and other like pests. The usual way is to prick out small bits of the plants at a few inches apart, or even much less. In this way, however, the resulting carpet is too dense and often gappy. A way to avoid this is to get the area ready and take a patch of *Sedum Lydium* or *S. hispanicum* var. *glacum*, first breaking it up into rather small particles, then, taking it in a sieve to the required place, shake the sieve evenly all over the surface. With a little care quite an even groundwork may be made over large areas not easily covered in other ways, and this at little cost. A little fine soil sifted over the *Sedum* after it has been thus sown and gently firming all with a spade will complete the work. It is a good time for such work to be done now, as with the moisture in the soil the *Sedum* quickly takes fresh hold. Hot, dry banks may now be furnished on this plan for another season at little cost.

Chrysanthemum R. Hooper Pearson.—Those who have grown it will, I think, agree with me that it is one of the finest introductions of recent years. No yellow *Chrysanthemum* could be of a richer shade, the nearest approach to it in colour being the old incurved *Jardin des Plantes*, and its lasting powers are marvellous, both on the plants and cut. In type it belongs to the incurved Japanese, but it has none of the formality presented by the more globe-shaped varieties of the type. An acquisition to the exhibition big bloom section, it is even more so when grown without disbudding, as it produces well-developed and most vigorous sprays. I have at the time of writing plants struck early in July potted into 5-inch pots, and now carrying as many as eight flowers on the single stems, which are only about 2 feet high. Disbudded plants struck at the same time are carrying one big flower each at the same height. All my plants this year are on single stems, but, judging from their healthy appearance and the capacity they have for making a good number of cuttings of the right type, it should soon become well known and universally grown, and I have no hesitation in saying that it will become one of the most popular of bush varieties for flowering rather late—that is, towards the end of November and through the greater part of December.—J. C. T.

Lavatera assurgentiflora.—Some time ago Dr. Stuart kindly sent me from his garden at Chirside flowers and young plants of *Lavatera assurgentiflora*, which he had raised from seeds sent from California. On November 25 a bright and gathering of flowers and leaves arrived from

Dr. Stuart, and so pretty and fresh do they look that I cannot resist the temptation to refer to them. These flowers, it must be remembered, are not from under glass, but are from an open wall with a western exposure. Dr. Stuart tells also that they were grown 400 feet above sea-level and in a windy, exposed situation. It is, I think, doubtful if this uncommon plant can be trusted to stand the winters of Berwick or other northern counties in the open, but those who have the accommodation might lift it and winter it under glass. This is the treatment recommended by the sender of the plants earlier in the year. I believe that *L. assurgentiflora* is rather tall in growth. It is, so far as one can judge from the material available, a handsome plant with its fine Vine-like leaves and its bright flowers, which are almost crimson in their colour. I hope to have the satisfaction of blooming my young plants next year, and afterwards of testing the hardiness of one of them in the course of the succeeding winter. From the appearance of the plants I am hopeful that *Lavatera assurgentiflora* may be harder than has been thought.—S. ARNOTT.

Carica Papaya (common Papaw).—Some very fine examples of this may be seen in fruit in the conservatory at Gunnersbury House at the present time. The seeds were sown in February and the seedlings planted out in March, the object being to keep growth going briskly and so endeavour to bring the fruits either to perfection or as near this as possible. How far success has attended the efforts is not yet fully apparent, but a few days ago many fruits were of large size, some fully 6 inches or 7 inches long and probably 3 inches in diameter. The ends are somewhat equally tapered, and the dark olive green colour would suggest some time before the fruits were fully ripe. Externally the fruits are rendered rough by deep, almost longitudinal depressions, while the method of hanging to the tree displays them fully. The fruits appear in the axils of the leaves, and the latter, long since mature and fallen, leave the fruit suspended by a short stalk. The plants in question must be fully 12 feet high, the erect stem-like trunk perhaps nearly 2 inches in diameter at the base. It is interesting to note the abundant fruiting right away to the summit of the plant, though there is very little hope of these small fruits ever maturing. All the same, they exist in numbers, many being no larger than a half-ripe Fig. Not of the least importance when growing is the handsome palmately-divided leaves borne on long terete petioles, the leaves occurring alternately, or nearly so, on the stem. Though usually regarded as stove evergreens, the plants referred to have shed many of the lower leaves, and would appear best treated on the lines of a stove annual, though, to secure a more general fruiting, even an earlier start than here stated may be desirable. On the Gunnersbury plants there are at least a dozen fine fruits, to say nothing of numbers of medium and small ones.

BOOKS.

CATALOGUE OF PLANTS IN ABBOTS-BURY GARDENS.*

We have here a neat little book containing the names of the plants cultivated in one of the most beautiful and richest gardens of our day. The fashion of printing lists of plants grown in large gardens was more commonly followed a few generations ago than now. Such lists are not only of present interest, but may be of value in the future. Abbotsbury is almost wholly an outdoor garden, having no hothouses.

The weather in West Herts.—A warm week with two cold nights, on the second of which the exposed thermometer registered 12° of

"Catalogue of Plants in Abbotsbury Gardens," By "M. I.," assisted by Joseph Benbow. Privately printed.

frost. This is the lowest reading shown by this thermometer since the end of March. At 2 feet deep the ground is now about 3°, and at 1 foot deep about 5° warmer than is seasonable. Since the beginning of the month rain has fallen on three days, but to the total depth of less than half an inch. November proved a very warm month; indeed, the warmest November since 1888, or for eleven years. On no night did the thermometer exposed on the lawn show more than 10° of frost. Rain fell on nine days (a small number for the month) to the aggregate depth of 3½ inches, or more than half an inch in excess of the November average. The distribution of the rainfall was, however, peculiar, no rain at all falling after the 10th. The record of bright sunshine fell short of the mean for November by about ten minutes a day. The most noteworthy feature of the past month was the small amount of moisture in the air. In the last fourteen years there has been only one other November with an atmosphere so generally dry.—E. M., *Berkhamsted*.

LAW.

XL All Vaporiser.—Messrs. Jacob Wrench and Sons (Limited), London Bridge, were summoned last week before the Lord Mayor at the Mansion House by the Pharmaceutical Society for on November 7 unlawfully selling to Harry Moon a certain poison, to wit, a vegetable alkaloid called nicotine, in contravention of the Pharmacy Act, 1868. Mr. Vaughan Williams, who appeared for the Pharmaceutical Society, said the article sold to Mr. Moon, who represented the registrar of the society, was a vaporiser to be used in greenhouses for the destruction of insect life on plants. One drop of the article put into the mouth of a rabbit killed it in twenty-one minutes. The label stated that the article should be kept in a safe place out of the reach of children. Dr. Stovenson, analyst to the Home Office, said that he had analysed a bottle of the article, which was called the "XL All Vaporiser." It was a solution of nicotine and camphor in diluted alcohol. The bottle contained enough to kill thousands of people if it were swallowed. In reply to the Lord Mayor, the witness said that three, four, or five drops, if taken, would be fatal to human life. The Lord Mayor said he was satisfied that this was a poison within the meaning of the schedule. Mr. Avery: It is an important question. Will you state a case? The Lord Mayor: Certainly. The Lord Mayor imposed a fine of £5 and £10 10s. costs on the first summons, and a nominal fine of 10s. on other two summonses, and the costs of the summonses. He hoped that in the meantime the sale of the compound would be stopped. Mr. Avery: As far as my clients are concerned they have already discontinued it. The Lord Mayor said he did not wish to prejudice the case, but he would suggest that the bottles sent out should be called in.

OBITUARY.

Mr. W. H. Protheroe.—We regret to announce the sudden death of Mr. W. H. Protheroe, who, as a senior member of Messrs. Protheroe and Morris, auctioneers, of Cheapside, was widely known and universally respected. The deceased has not of late years enjoyed the best of health, but the end during the early hours of Saturday morning last was quite unexpected. The deceased was in the fifty-fourth year of his age, and his loss will be felt throughout the United Kingdom and in those portions of the Continent to which he had been a visitor.

Names of plants—A. E. W.—1, *Swainsonia galegifolia*; 2, *Ficus repens*; 3, send better specimen; 4, *Justicia*, send in flower.—A. Kingsmill.—1, *Elaeagnus pungens*; 2, *Campanula persicifolia*.

THE GARDEN.

No. 1465.—VOL. LVI.]

[DECEMBER 16, 1899.

INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—

Apple Bramley's	474
Apple Cornish Gilliflower ..	472
Apple Cox's Orange	472
Apple Margil	473
Apple Newton Wonder ..	474
Blight, American, woolly aphid, &c.	473
Grapes Gros Maroc and Gros Colmar	474
Lime and Cherries	474
Pear Althorpe Crassane ..	474
Pear Aston Town	473
Pear Beurre d'Anjou	474
Pear Beurre Diel decaying ..	471
Pear Beurre Superfin	473
Pear Durodeau	474
Pear Emile d'Heyet	472
Pear Flemish Beauty	473
Pear Forelle, or Trout ..	474
Pear Marechal de la Cour ..	474
Pear Marie Louise	474
Pear Olivier des Serres ..	474
Pear Passe Colmar	474
Pears, stewing	473
Plum Coe's Golden Drop ..	473
Quince, the	473
Raspberries, cutting back ..	472
Strawberries, new and old ..	471
Trees, Peach and Nectarine, young and old	473
Trees, Plum and Pear, neglected	474

Kitchen:—

Beet, Globe-shaped	476
Borders, flat v. sloping ..	476
Broccoli, late	478
Brussels Sprouts	478
Cabbage Old Essex	478
Celery Major Clarke's Solid Red	478
Greens and caterpillars ..	478
Greens, winter	476
Marrows without manure ..	478
Onions	476
Potato culture, early	477
Potatoes, coal ashes for ..	476
Roots through the winter, preserving	476
Tomato Ham Green	476
Tomatoes, corrugated v. smooth	476
Turnips, shortness of winter ..	478

Orchids:—

Cattleya Harrisoniæ	479
Cypripedium Lecanum	479
Dendrobium sanguinolentum ..	480
Lælio-Cattleya Statteriana ..	479
Odontoglossum Cervantesi punctatissimum	480
Oncidium cheiroporum	480
Orchids, natural hybrid ..	478
Scale, Stock-seed, on Orchids ..	480

Garden Flora:—

Meconopsis heterophylla ..	480
----------------------------	-----

Week's Work:—

Kitchen garden, work in the ..	481
Fruits, hardy, work among ..	482

Stove and Greenhouse:—

Carnation Mrs. L. de Rothschild	483
Carnations in winter	482
Daphne indica	483
Eucharis amazonica	483
Isoloma Vicomte A. de la Combe	483
Solomon's Seal for forcing ..	483

Tress and Shrubs:—

Abies growing at Ochtertyre, near Crieff	483
Dublin, a note from	484
Shrubs in bloom in S. Devon ..	484
Vitis inconstans in fruit ..	484

Flower:—

Iris sofaraensis	486
Iris sofaraensis	486
Tropæolum tuberosum	486
Water Lilies, tropical, in the open air	486

Chrysanthemums:—

Chrysanthemum cuttings ..	487
Chrysanthemum Hairy Wonder	488
Chrysanthemums, bush	487

Chrysanthemums, Calvat's

novelties	487
Chrysanthemums, good old ..	487
Chrysanthemums, hardy	488
Chrysanthemums, late	488
Chrysanthemums, single, exhibiting	488
Chrysanthemums, some new ..	488

Notes of the Week:—

Begonia acotrana	489
Canaria campanulata	489
Cestrum aurantiacum	489
Chrysanthemum Fleur de Marie	488
Chrysanthemum rust, the ..	489
Chrysanthemums in the west of England	489
Crocus hyemalis	489
Cypripedium insigne at Syon	488
Erigeron speciosus superbus ..	489
Garden, notes from a Cornish	488
Heliphila scandens	488
Hibiscus Archeri	488
Iris stylosa	489
Kniphofia Tucki	489
Rhododendrons flowering in the open	489
Roses in December	489
Sedum brevifolium	489
Violet La France	489

Public Gardens:—

Brighton, a new park for ..	490
Open spaces	490
Rochester pleasure ground ..	490
Tudor House, Bromley	490

Obituary:—

Outram, Mr. Alfred	490
--------------------------	-----

Miscellaneous:—

Arthrotaxis lacifolia at Menabilly	477
Clematis cirrhosa	490
Conferece mania, the	490
Dracena in fruit at Menabilly ..	475
Hydrangeas at Menabilly	484
Menabilly	475
National Dahlia Society	490
November in S. Devon	485
Pine, the Mexican, at Menabilly ..	479
Portlandia grandiflora	490
Royal Fern and Gunnera at Menabilly	480
Royal Horticultural	490
Stokesia cyanea	480
Trees, the artistic planting of ..	484
Weather, the, in W. Herts	490
XL All vaporising compound and the Pharmaceutical Society	490

ORCHARD AND FRUIT GARDEN.

STRAWBERRIES, NEW AND OLD.

I HAVE read with some interest recent remarks in THE GARDEN on Strawberry culture, and two things have struck me. One was the statement that if late Strawberries could be grown profitably in the south they no doubt would be grown, and it is suggested that they be given a north border. The other statement was that the Elton Pine is too late to produce runners that will fruit the following season. With regard to late varieties in the south and north, all that need be said is that late Strawberries ought to be late anywhere, north or south. It is not the season that makes the difference; the plant itself is late. Elton Pine will come in earlier in the south than it does in the north, but it will be just as far behind the earlier kinds as it is in Scotland. As to the Elton Pine being a late grower, I augmented my own stock this year from Forfarshire, N.B., and although the plants had not been specially layered, but were just self-rooted runners, I expect them to fruit next year by the look of the crowns, and if they had been prepared and got sooner there would have been no fear at all of them fruiting next August and onwards.

As regards kinds of Strawberries, I have strong doubts about a number of the newer kinds. I would like to ask where a better grower, a more prolific kind, or a finer well-coloured berry could be found than in the old Keens' Seedling, now about 100 years old? It is a sort I have never seen surpassed for forcing, general crop, or for preserving, and I have seen it do equally well on poor sandy soils in England and on loamy soils in Scotland. There are, however, a few soils on which it is not fertile, growing rampantly, and one of these is the rather poor, cold soil that lies above the coal in South Yorkshire. In several gardens lying not far apart there it had to be given

up. Generally speaking, however, it is still one of the very best and trustworthy. Dishes that I have seen of it exhibited in Edinburgh and elsewhere in March and April have never been surpassed. I am quite certain that some of the new kinds are inferior to Keens' Seedling, and I have known it all my life and seen most of the others. Some of the new sorts are impostors. Noble, for example, was only tried to be thrown away, as it was neither fit to eat nor to preserve and was one of the worst of travellers. Then Latest of All, we have just had shown, is not a late Strawberry at all.

The one Strawberry that has succeeded Keens' Seedling most generally is Héricart de Thury, and those who find it a success should stick to it. I have tried every likely kind and have kept to it for the maincrop ever since it came out, always propagating from my own stock, and never missed a crop except when frost caught the flowers. No Strawberry is worth much that has not good foliage and is not hardy, and these qualities H. de Thury possesses. It keeps its foliage green throughout the winter almost as well as Keens' Seedling, and that means a good constitution. The fruit reaches a size to satisfy anyone, and when thoroughly ripe it is an excellent dessert kind. It is also much liked for preserving, having a bright colour. The next best to Keens' among old sorts is British Queen. I never forced any other for a late crop, and it has never been surpassed for exhibition. Many years ago Mr. McEwan, of Chiswick, used to show it very fine, and the late Mr. Tillery, of Welbeck, used to show dishes of it at York that have not been beaten for size, colour, and quality. The fault of British Queen is that it is a poor grower, and in dry soils is eaten up with red spider. It must have the warmest spot in the garden and a moderately heavy but permeable deep rich soil. Give it these, do not plant too thinly, and there will be no fear of a crop of fine fruit, which the grower may show anywhere with success. Add to these sorts the Elton Pine, and the list cannot be easily beaten.

Newer kinds introduced since many gardeners can remember are Sir Charles Napier and Sir Harry, two good prolific sorts, but a little erratic and inconstant. Dr. Hogg was of the British Queen type, but a shy bearer. James Veitch was good to eat, but not reliable for general crop; but Veitch's new Perfection is a good grower, throws up a fine truss of flower, has also fine foliage and is a distinct sort. I lost the whole crop last year by frost when the plants were in flower. Royal Sovereign is well spoken of, and I have planted a lot of it this autumn beside Vicomtesse Héricart de Thury, and so far I must say it is by far the weaker grower of the two.

A word about early varieties. In the lists there is, I see, a King of the Earlies (Laxton), which means, I presume, that it is the earliest but I venture to say that it has no more claim to be so described than Latest of All has to its name. The earliest really useful Strawberry (for perhaps the last fifty years or more) is Cuthill's Black Prince. I forced it regularly for about twenty years, and never found one to match it for a fine crop, coming in late in February and in March, while outdoors it came in before any other early sort tried. The fruit is not large, the largest seldom exceeding 1½ inches in diameter, but it is finely coloured and nicely flavoured. The plants require about half the space necessary for the stronger growers and much fruit can be got off a small space.

J. SIMPSON.

Pear Beurre Diel decaying.—I was rather surprised on being told by a friend at Norwich show that his fine examples of Beurre Diel Pear all went soft and useless at the beginning of November. This is, I think, no doubt attributable to the season, although fruit of the same variety was exhibited at the same show in a perfectly sound condition from several other gardens not far distant. This would seem to indicate that soil has something to do with it. Probably also those which decayed prematurely were from wall trees, the others from pyramids or bushes. Such instances, at any rate, prove that an extra

sunny season is not quite the best for finishing up Pears, a certain rainfall being indispensable for communicating to the fruit that virtue necessary not only to perfect flavour, but also to keeping. The Beurré Diel I tasted at Norwich show was the freest from grit and most juicy of any I have seen.—J. B. S.

Apple Cornish Gilliflower.—I think that all who are acquainted with the merits of this Apple will agree with the editorial comment on the specimens sent by Mr. Burrell. I consider it quite equal as regards flavour to Ribston and Cox's Orange, while it is superior to either in keeping qualities. With me it would keep in good condition until March, but I have but few fruits left of it after the turn of the year. I grow it as a bush on the Paradise, and if it does not bear a heavy crop it fruits very regularly. I contributed a dish of this variety to the Hereford show a few weeks back, and the fruit was pronounced by many to be the finest samples they had ever seen of it. Were I about planting a new collection of Apples, one or two trees of Cornish Gilliflower would most certainly be included. There is no difficulty whatever in its cultivation; the only thing, as the editor truly remarks, is to beware of cutting away the fruit-buds which form so freely on the tips of the young shoots.—A. WARD.

Apple Margil.—It is very seldom now-a-days that one either sees or hears of this delicious Apple. Of course, the reason is that it, like its relative, Ribston, is liable to canker, and is, under rough-and-ready treatment, anything but a robust grower. All the same, such is its value as a dessert Apple, that the pains necessary to ensure success with it amply repay the cultivator. No one having a low situation and retentive soil need plant Margil with any hope of success, but where the garden is well drained and the soil fairly warm and friable this Apple will succeed worked on the Paradise. The trees should be planted near the surface, rather mounding up the soil somewhat than sinking the roots much below the surrounding level. Bush trees are the best, no further pruning being required than balancing any irregular growths and keeping the centres open. Any spare soil from the frame or compost yard, together with burnt refuse, wood ashes, and road-scrappings, are welcomed by the roots of this and other tender Apples if worked carefully and firmly amongst them at planting time.—J. C.

—This Apple was well exhibited at Bury St. Edmunds, and it is one of the best dessert kinds. It is quite large enough for dessert, and its flavour seems to be between that of Ribston and Cox's Orange Pippin. I know of no other kind, in fact, that so nearly approaches this the best of all Apples for flavour. Margil is not perhaps the best of growers, its somewhat twiggy habit as well as its liability to canker on very ungenial soils being against it. In fairly light and workable soil if planted properly and the roots kept up there are few kinds that will give greater satisfaction.—H.

Apple Cox's Orange Pippin.—The season seems to have been an unusually good one for this the best of all dessert Apples, and I do not remember a season when so many fine dishes have been staged. Possibly in some instances shortage of crop has made the individual fruits finer, and, if so, this should be a lesson to those who even now persist in leaving their fruit as thick on the trees as it is produced, a host of little scrubby specimens that never can be of any good, robbing the better-placed and larger fruits of their sustenance. Want of time for thinning is no excuse, for when they are left on they are gathered, and it is no more trouble to take them off when young. Although Cox's Orange Pippin will often produce a few extra fine fruits on espalier trees, it seems much more at home when allowed its head and delights in a light sandy soil. Much the finest and most prolific tree of this variety I have ever seen grew in the light red soil above sandstone in Gloucestershire, and many first prize dishes

were gathered from it. It was a standard and never root-pruned, and, in fact, little branch-pruning was necessary.—H. R.

Pear Emile d'Heyst.—I am glad to see "A. W." has a good word for this Pear. As a bush or pyramid it is excellent in every respect, the tree moderate in growth, free bearing, while the fruit is of very good quality, and does not go rotten so quickly as many early winter Pears when it has reached a matured stage. With me it has been much undersized this year owing to the drought. I certainly do not claim for it a quality equal to Marie Louise, but those who depend on the bush or pyramid tree for their crop will find this much more reliable than Marie Louise. In some soils this is scarcely worth growing as an open-air tree. A fault of the higher-class Pears grown as pyramids is the difficulty that comes from wasps and birds. Unless carefully protected, few sound fruits remain by the time they are ready for gathering. In the case of small trees it is a different matter. On the walls I do not find either birds or wasps give much trouble, though why it should be so it is not easy to say, unless it be that there is ample for their needs on the large bush trees in the open, and even then it is curious that this should be so when one is so closely contiguous to the other. Does "A. W." find this to be the case in his garden? I have noticed the same thing here for several years.—W. S.

PEARMAN APPLES.

THE Pearmain is a very distinct type of Apple, and it owes its name to the peculiar formation of the fruit. Nearly all the varieties are conical in shape, the height of the fruit greatly exceeding the width at the base. Some are tapering and others are bluntly formed at the apex, and, generally speaking, all have a symmetrical appearance. They vary from large to small, and consist of both cooking and dessert varieties. Some come into use in the autumn, others in the early and midwinter months, while others are late keepers, and if properly stored may be had in good condition late in the months of April and May. With regard to colour, some are very brilliant, while others again are nearly green, or have only a dull reddish flush on the side exposed to the sun.

The two most beautifully coloured in the whole section are the Worcester and Scarlet Pearmans. The latter is not often met with now, but the former has become a universal favourite both with private and market growers for early supplies. Large quantities are grown every year and sent to the various markets, where they realise high prices, the returns being very little less than are obtained for Peasgood's and other high-class Apples. Mabbott's Pearmain is another highly coloured sort, which in point of flavour surpasses the two previously named. This Apple has a distinct open eye, very much like Blenheim Orange. It is medium-sized and keeps late. Claygate does not carry so much colour, but it is larger and more richly flavoured than either of the preceding. The colour in this case is greenish, which changes to yellow when the fruit is fully ripe, and on the sunny side the skin is suffused with dull red. Another conspicuous feature is the whitish-grey dots with which the surface is besprinkled. It is a true Pearmain-shaped Apple and will keep in capital condition until late in March. As a standard it bears regularly and crops heavily. Herefordshire or Royal Pearmain is a well-known variety that grows to a large size. It succeeds well either as a standard or bush, and on the former style of tree very handsomely coloured fruits are to be obtained. This Pearmain is largely cultivated both in the county of Hereford and adjoining counties, and is very much appreciated by some people as a dessert fruit for winter use; in fact, I know of one person who gives it the preference over Cox's Orange. Its season is from November to March, but it will, I am afraid, hardly keep so long this season. Adams' Pearmain, which is essentially a Hereford-

shire Apple, is widely known and extensively grown both for private consumption and market. This does not grow so large as Royal Pearmain, but is equally as handsome. The shape is very distinct, the fruits tapering off very much towards the apex, and, with the exception of the next one to be named, more so than any of the Pearmans. The colour is yellow, well-grown specimens being covered nearly all over with dark crimson, and they have very conspicuous greyish dots sprinkled all over the surface. London Pearmain is very similar, only smaller, the colour brilliant red instead of dark crimson, and sprinkled with very numerous greyish dots. Both are excellent, richly flavoured Apples, and are in season from November to the end of January. As standards they bear very heavily, but they may also be cultivated in any other form with success. Old Pearmain, which is considered to be the oldest Apple in cultivation, is another well-known highly-flavoured sort and largely grown in the county of Hereford. Some magnificent specimens of this Apple which were grown in the district between Ledbury and Gloucester were exhibited at the great Ledbury fruit show some eleven years ago. It is in use from now until the end of the year, and does well as a standard. Blue Pearmain, as the prefix denotes, is of a blue or purplish hue in colour, but is otherwise a very excellent Apple. This used to be exhibited in fine form at the Hereford shows by Mr. Wright when living at Glewston Court. It is in season from the end of the year until April. Hornead's is quite the opposite in appearance from those already named, as it is nearly, if not quite, green in colour and large. Its chief merits lie in its being an excellent cooking Apple and the fact of its being a long keeper, as it remains in use until March. Mannington's is a pretty dessert Apple and very high flavoured. The surface of the fruits is covered with light brown russet, and on the side next the sun it has a bright red cheek. It is a good keeper and succeeds well grown in bush form. Ribston Pearmain is a yellowish-coloured fruit, with a few patches of russet on the surface, with a dull or brownish red cheek on the sunny side, somewhat like Ribston Pippin. It is at its best about Christmas and is a rich, good-flavoured Apple. Lamb Abbey Pearmain is an excellent variety to grow in a garden as a bush. The fruit will keep in a cool store until Apples come again. The fruits are small and green or greenish yellow in colour and the skin is covered with a red flush also in a warm season. It has a crisp-eating flesh and is of very good flavour. Winter Pearmain or Duck's-bill is another popular sort hailing from the south eastern and southern counties. It is also known as Sussex Scarlet Pearmain and Winter Queenening, but is distinct from the Hereford Winter Queenening. It is a medium-sized fruit and very prettily coloured, it being good either for cooking or dessert, and will keep if required until April. Another variety named Baxter's Pearmain is a very old sort that used to be grown much more extensively than now. It is a very free bearer, and an old tree which at one time occupied a position in the kitchen garden here used to carry heavy crops with great regularity. It may be used either for the kitchen or table, and is something like the Old Pearmain in appearance. Next comes Grange's, which is something like Herefordshire Pearmain and is a first-rate dessert Apple, in use from the end of the year until the end of March. Then there is the Golden Winter Pearmain, which many consider to be synonymous with King of the Pippins. According to my experience, the only similarity is the flavour, which is almost identical, otherwise there is a wide difference in the size of the fruit, which is of a true Pearmain shape and much larger. The fruits are also of a beautiful golden colour, with a red cheek, but they never take on the amount of colour that King of the Pippins does.

The above include the best known varieties of Pearmans. I have not included Orange Pearmain. This is, I think, going out of cultivation. It is a pretty-looking fruit, but at the best is only

second-rate in flavour. It was this fact that induced me to discard it, otherwise it is a great bearer. There are a few other sorts, such as Christmas Pearmain, Barcelona, Balchin's, Gidley's, Rushock, Loan's, and Russet Table Pearmain, all of which have good reputations both for flavour and good keeping qualities, but I am unable to speak of them personally. A. W.

Cutting back Raspberries.—I have been much interested in the correspondence on this matter because it is one upon which opinions differ. So far as I can see, the argument in favour of cutting back canes at the time of planting is to ensure stronger growths from the base, and the argument against the practice is that by carrying it out the next season's crop is needlessly sacrificed. I quite agree with "W. S." that the energies of strong canes if allowed to fruit the first season become used up and they produce little or no sucker growth. At the same time a grower who wants fruit does not like the idea of sacrificing the whole of the first season's crop. The best plan then is to adopt the middle course, which consists in planting the canes rather closer together than usual and cutting back every other cane. Those cut back will have every chance of producing strong canes for subsequent fruiting, and those left to nearly their full length will produce some fruit. If the strain is too much for them and they send up no sucker growth, they may be cut out in favour of the canes from the cut-back plants.—H. H.

Plum Coe's Golden Drop.—I have to-day (November 18) seen some remarkably good specimen fruits of this useful Plum which have been kept in a fruit room in the ordinary way like Apples, and I could not help thinking what a boon a lot of fruit like this would be. It is a little remarkable that this Plum is not more generally grown, for it is really of excellent quality and prolongs the season in a remarkable manner. It is too much the custom to place it in a poor position and closely prune the breast-wood in every season instead of allowing it a little liberty. The trees when young are given their head too freely; then, when they have about filled their space, the branches are topped, the summer shoots are pinched, and every bit of new wood is taken off in winter. Better by far be content with a less rapid progress at first, even going to the extent of root-pruning if need be—at any rate, pinching the vigorous top growth. Then the trees would eventually be more evenly balanced; the tops would not show such a disposition to run away in front of the lower portions, and a few new shoots could be found room for annually in fan-trained trees at any rate, bringing with them increased root-action, and, therefore, greater vigour to the trees as a whole.—H. R.

Pear Beurre Superfin.—I was interested in Mr. Ward's account (p. 410) of the variation in the skin of Beurre Superfin Pear, and have the same experience, with this difference, however, that I find situation and aspect have some influence in the matter. I have on a south wall a large horizontally-trained tree which produces very fine, smooth-skinned fruit of a pale lemon colour when ripe. Another fan-shaped tree on a wall facing S.E. has its fruit much deeper in colour, some fruits being beautifully flushed on the sunny side, but, like the others, quite smooth. On an east and north-east wall the difference is very marked, both cordon and fan-shaped trees having their fruit quite russety, and in some seasons very rough, although the flavour, as Mr. Ward says, is quite equal to that of the finer and smoother-skinned fruits. I have a keen recollection of noticing the change of type brought about by double grafting in some specimens exhibited by him at our Hereford show last year. I believe, too, that they are later in ripening, which is a considerable gain, lengthening, as it does, the season of so fine a Pear. On p. 411 Mr. Ward does well in drawing attention to the need for more root-pruning as a means of greater yield in fruit. I have had to resort to it

in the case of some young trees planted round the vegetable quarters here three years ago. Without doing so in a rich soil I might look in vain for anything like a crop.—E. Fox, *Garnons*.

American blight, woolly aphid, &c.—Among the many obstacles which the forester and gardener have to contend with in the successful cultivation of their timber and fruit trees are the ravages of injurious insects. These, from the subtlety of their operations and the obscurity of the life-histories of most of the species, have always proved a troublesome matter. Various remedies, such as petroleum, sulphate of copper, arsenic, coal tar, &c., have been found quite capable of killing or arresting the progress of such pests, but, unfortunately, they have proved dangerous, if not positively harmful, to the health of the trees by not only destroying the outer bark, but often penetrating to the cambium, the more liable to injury of the two, with the inevitable result—the destruction of the tree itself. I have tried many of these with disastrous or indifferent results. One composition, however, I have found to be efficacious both as a preventive and as a cure for the American blight (woolly aphid, woolly bug), bark scale, Larch aphid, red spider, and other pests of similar habits. This is Ahlbotn's composition. It is a treacly fluid, which I apply to the trees with a brush, painting the affected parts thoroughly over. All excretions on the bark that offer a favourable lodgment for the ova of the insect are treated with extra care. I may add that a second application is very rarely found necessary. It is inexpensive and can be procured from any seedsman, and, while perfectly harmless, has an antiseptic and healing effect on gnawed or otherwise damaged bark.—OMEGA.

YOUNG AND OLD PEACH AND NECTARINE TREES.

The note from "H.," commenting on a previous article contributed by another correspondent, contains some instructive reading (see GARDEN, p. 395). There are several points therein to which I, as a fruit grower, attach particular importance, as they are of great practical value to the grower of the Peach under glass. The first of these is where "H." alludes to the wisdom of having a reserve stock of trees on hand outdoors, where, of course, the wall space can be spared and the locality suited to outdoor Peach growing. There is nothing new in this I am aware, as such advice has been tendered over and over again in the pages of this journal, but is it acted upon as often as it might be? The importance of making such a provision cannot, I think, be over-rated, and where much Peach forcing is carried out it means a great saving in point of time and also prevents loss of crop. There is just the same liability for losses to occur among Peach trees grown under glass as there are outdoors, and sometimes a tree has to be discarded, perhaps, through its being an unsuitable variety or from other reasons, and when these losses have to be made good by young trees bought in from a nursery, it need hardly be mentioned that several seasons must elapse before such arrive at full bearing condition. Under such circumstances if there is a reserve from which trees may be taken whenever necessity arises there is no loss of time or of crop if the lifting is properly performed. The following case may be mentioned in support of this. Last season I had occasion to lift a full-sized tree of Lord Napier Nectarine to replace one that had become worn-out indoors. This was done just before the fall of the leaf, and great care was taken to have a good ball of soil attached to the roots. The tree when partly planted was well watered home and allowed to remain a few hours to settle down before finishing off. In the spring it flowered well and set a good crop of fruit. This was thinned down so that about eight dozen remained, which the tree perfected; the fruits swelling to a fine size and finishing well. To show how little effect the lifting had on the tree, the latter also made plenty of good wood in addition to carrying a crop of fruit. This latter case

is not a solitary instance, as I have done the same thing many times previously with Peaches as well as Nectarines, and so well does it answer that I contrive to have trees of suitable varieties growing against walls outdoors, that can, if required, be lifted for this purpose at any season. With regard to the age of the trees, I am not at all particular as to whether they are five, ten, or fifteen years old, so long as they are healthy and well furnished with bearing wood, as such will, with proper care and attention, yield good crops of fine fruit for many years afterwards. The advice "H." tenders with respect to the right period at which to lift and subsequent treatment, together with the construction of shallow and narrow borders rather than deep and wide ones, is well worthy of the attention of all about to plant either Peach or Nectarine trees under glass, and if adopted no misgivings as to the result need be feared. A. W.

Stewing Pears.—Most varieties of dessert Pears are good for stewing when approaching ripeness, and some have advanced this fact against the culture of cooking kinds. But it is a mistake not to grow the latter, for in seasons of scarcity of both Apples and the best Pears these often have good crops, and they are then, of course, doubly useful. Catillac is a capital stewing kind, thriving well in almost any description of soil and situation, and, when well placed, giving remarkably fine, clean fruit. St. Germain is large, but not, I think, of the same quality when stewed as Catillac.—H.

The Quince.—The Quince is now so generally used as a stock for working the choicer Pears on that its use as a fruiting tree is in a manner lost sight of. Good cooks know well enough how to make use of as many Quinces as can usually be supplied, and are always glad of them. Again, it is one of the prettiest of all fruiting trees, the bright green tint of the leaves and the pretty blossoms being well set off by the spreading semi-pendulous habit. No tree is easier to grow or more able to take care of itself, and, like the Medlar, it ought to be planted in the pleasure grounds. Quite large trees of it can be transplanted with ease and certainty at the time the leaf is falling, and it may be quickly and easily raised from cuttings.

Pear Aston Town.—"B. S. N." asks for information respecting this now little-grown but highly flavoured autumn Pear. The following may, however, be of interest both to him and others. Aston Town Pear is, I believe, still to be met with in the county of Hereford, where it is, I think, chiefly grown in the form of standards. Some years ago this variety was exhibited at one of the Hereford fruit shows by the late Mr. Piper, of Ledbury, in excellent condition, and if my memory serves me rightly, this variety won the first prize for the best flavoured Pear in the show, certainly on one occasion. Mr. Piper informed me that the tree which produced these fruits was growing against his house, but I cannot now remember the aspect. I well recollect tasting this Pear at Mr. Piper's invitation at the time it won the prize for flavour, and found it a most delicious buttery fruit. It is well figured in the "Herefordshire Pomona," no doubt from specimens supplied by Mr. Piper, as the latter gentleman and Dr. Bull were very intimate. The fruits bear a strong resemblance to Eyewood, another old variety now seldom met with, and which used to be somewhat extensively grown hereabouts.—A. W., *Stoke Edith, Hereford*.

Pear Flemish Beauty.—"Norfolk," in a short note on this Pear, alludes to the fact of his not having grown it on the Quince stock. It may, therefore, interest him to know that I have a good-sized pyramid of Flemish Beauty on the Quince which bears remarkably well and also makes good growth. The fruits, too, are superior in flavour to those produced by trees on the Pear stock, they are quite as large and are much more handsomely coloured. The dish of Flemish Beauty I sent to the Chiswick Pear

Conference was gathered from this tree, and that year the fruits were brilliantly coloured and fine in size. Trees of this variety if worked on the Pear stock are not very suitable for garden culture unless, as "Norfolk" says, they receive careful attention, it being such a strong grower. If its roots are kept curtailed it will succeed, but if neglected in this particular the results are disappointing. If proper attention cannot be bestowed on the trees in the way of root-pruning, the better place for them is the orchard, where they can grow away unrestricted, unless there should be sufficient room in the garden for the branches to extend outwards and upwards. The difficulty can then to a great extent be overcome, as the fact of their being allowed to make free growth tends to the exhaustion of superfluous energy and eventually leads to their becoming fruitful. Even then an examination of the root system would become necessary, in case some of the strongest might descend into the subsoil, which would have a tendency to render the fruits insipid and flavourless.—A. W.

NEGLECTED PLUM AND PEAR TREES.

WHAT is the proper treatment of a row of neglected Plum and Pear cordon trees as to cutting and pruning? Should all the old wood be cut out?—M. D., *Bedfordshire*.

* * The first thing to be done to cordon trees in a neglected condition should be to cut away to within one or two eyes of their base all shoots of the present year's growth, except perhaps the upper or leading shoot, which may be left on to further extend the main stem, if such extension is desirable. The new shoots alluded to above may be readily recognised by the absence of side growths and by their Willow-like appearance, for the growth having been neglected there will of course have been no summer pruning or pinching to cause them to break into more than one lead; therefore it will be safe to cut all shoots of this nature back almost close to where they sprang from or to where the simple stem becomes divided into the short, stubby growths, bristling with buds, which are known as fruiting spurs. This leaves us only wood more than one year old to deal with, and how much or how little of this wood should be left is a difficult matter to advise about without seeing the trees. If the neglect has only been for one year there should not be much more to do, unless perhaps in the case of the Pear trees the fruiting spurs may have become too thick and would be better for thinning. This ought only to be undertaken by an expert, but "M. D." may do it himself, for it is not a difficult matter when a little intelligence is applied. It may be taken for granted that all the fat brown buds on short stems are fruiting buds, and that probably at least one-third of these will bear bunches of flowers, most of which will set fruits if the weather is favourable. When we think that half a dozen fruits to a foot-run of a cordon tree would represent a heavy crop of a medium-sized Pear, we can readily see what a lot of wasted force there is in allowing a hundred blossoms to be borne in a space only sufficient to carry a dozen fruits, and it is a fact that the reduction of spur growths on trees thickly laden with them strengthens the blossom-buds left behind and helps us to better fruits. The reduction of spur growths is carried out in two ways. If they are long and straggling they may be shortened back, leaving from six to ten buds on a spur. If they are very thickly placed on the main stems it is advisable to cut half of them out bodily, the result being a new crop of spurs at the same point, which will be ready for fruiting in a year or two, when they should take the place of those now left and which can then be cut away in their turn.

Turning to Plums, we have to put up with a more straggling spur growth, for, except in the case of a few varieties, the fruit-spurs are not borne so close at home or in such clusters as those of the Pear, and the amount of pruning, beyond cutting back the young wood, which would be safe could

only be determined on the spot. Cutting back the spurs to their base would result in the production of a lot of new wood that would probably remain fruitless for years, as fruiting-spurs are slow to form on Plums. "M. D." should proceed with caution this year and watch carefully the progress of the trees as regards the production of flowers and fruits, basing the future treatment as regards pruning on his observations of results next year. During the summer it will be advisable to pinch out the points of strong growths two or three times during the season. If "M. D." could get some advice from an expert on the spot, especially as to recognising fruit-buds from wood-buds, he would find it very helpful.—Ed.

Pear Olivier de Serres.—This is one of the best late Pears. It succeeds well on a south wall as a cordon, and fruits from such trees generally ripen perfectly if they are only allowed to hang as late as possible and afterwards stored in a cool fruit room. From here they should be brought into the Pear room proper to ripen as required. If placed in the Pear room as soon as gathered they invariably ripen prematurely. The fruit is medium-sized, roundish in shape, and flattened at the stalk and crown. The skin is covered with rich brown russet when fully exposed; when shaded it is a greenish yellow. The flesh is white, buttery, sweet and juicy, with a fine rich flavour.—A. W.

Filberts and Cobnuts.—These are not only generally planted in out-of-the-way places, but also frequently neglected for years together in the matter of pruning, thinning, and removing rubbish which impedes the ingress of sun and air to the roots. Neglected trees are sometimes taken in hand all at once, receiving such a dressing with billhook and pruning-knife that a severe check is given. In such cases I would advise a gradual diminution of superfluous wood, extending it over several seasons, and when once the bush is got into shape preserve an evenly balanced condition by a little annual attention. That more sunshine and light than are usually accorded Nuts in general are necessary is proved by the heavy yields of Kentish plantations, the occupants of which are often restricted to so many main branches, spur-pruning being carried out. In any case the trees from first planting should be freely thinned, all useless sprays, of which there is generally a considerable percentage, being entirely cut away. An open, sunny position, the ground beneath and around being kept free from grass and weeds, and in dry summers a mulch applied are the conditions needed to secure the best results.—C.

NOTES AND QUESTIONS.—FRUIT.

Pear Forelle, or Trout.—This is a handsome medium-sized November Pear. The skin is pale yellow, bright red on the side next the sun, and regularly freckled with small grey dots. The flesh is white, half melting, juicy, sugary, with a perfumed flavour. It is a good hardy variety, succeeding well either as a standard or bush, and is a good cropper. It was formerly much grown in gardens, but is not seen so frequently now.—S. E. P.

Pear Passe Colmar.—This is one of our best December Pears. The tree grows and crops well, whether as a bush or horizontally trained against a south wall. In the latter case the fruits come larger, with a much clearer skin. Grown in the open, the fruits are smaller and are coated over with a rich brown russet—a sure indication of rich flavour. It is in use from the third week in November till the middle of December.—A. W.

Apple Newton Wonder.—The value of this variety is hardly appreciated as yet, but it will be a popular and useful kind without a doubt. Its handsome appearance and excellent quality, taken in conjunction with its long-keeping habit, are sufficient to ensure it a place, but it is also a very free-bearing kind, and in a neighbouring garden has fruited well this season and last, neither of which years has been remarkable for the quantity of Apples produced.—SUFFOLK.

Pear Beurre d'Anjou is a sort of great merit, and is highly recommended for orchard cultivation.

The tree grows and bears well, and the fruit will keep in good condition in some seasons till near the end of the year. The fruits are large and fine-looking, roundish in shape, with a smooth, yellowish green skin, sprinkled with brown dots. The flesh is white, tender, juicy and sweet, with a perfumed flavour. The tree succeeds equally well either as a cordon, bush, pyramid, or standard.—A. W.

Pear Marechal de la Cour.—This Pear succeeds well as a pyramid in the open ground. If grown as a cordon on a south-west wall and well cultivated, the fruits grow to a very large size. In shape the fruits are pyriform, and the skin is almost completely covered with russet, which is rather rough to the touch. The flesh is white, melting and juicy, with a fine sprightly flavour. It is in season during November, and may be had as late as the middle of December if stored in a perfectly cool place.—S. E. P.

Pear Marie Louise.—A superb dish of this Pear was staged at the Bury St. Edmunds Chrysanthemum show, not at all over-ripe and each one of perfect form and colour, with the bright russet tinge peculiar to this Pear. This dish was quite a contrast to some of the others shown, which were quite rotten. As long as exhibitors are allowed to take prizes with such fruits so long will they be forthcoming, but they are a disgrace to any show, and should have been thrown away or eaten weeks before.—S.

Gros Maroc and Gros Colman Grapes.—I have read with great interest the notes on early and late Grapes (p. 354). My opinion is that Gros Maroc is a better Grape in point of flavour and colour than Gros Colman, and in a house I recently saw the two Grapes were growing side by side. The superior quality of Gros Maroc could well be seen, the berries being very large, the colour of Damsons, and carrying a dense bloom. Gros Colman was far behind in colour and watery and poor in flavour compared with Gros Maroc.—A. E. WARNE, *Elstree, Herts.*

Lime and Cherries.—It has frequently been remarked that Cherries might be grown more largely than they are, and that other counties could share with Kent the profits from this important crop. Kent holds the monopoly of Cherry culture, and the cause, I think, can be traced to lime. It is obvious that Cherries like lime, and if this does not exist naturally in the soil and means are not adopted for supplying it artificially, it would be better to plant other fruit trees. Some of the best Cherry orchards I know are on land where the chalk is found within a few inches of the surface, so that practically the trees are growing in it.—H. H.

Pear Durendeu.—This, one of, if not the highest coloured Pear in cultivation, grows to a large size. The flesh, which is white, is very juicy and richly flavoured. It is a splendid dessert Pear, ripening at the end of October, and keeping quite three weeks afterwards in good condition. After arriving at maturity in warm districts the tree will grow and bear well in the open garden as a bush on the Quince, when it is exceedingly prolific, but in colder districts it should be grown against a west wall. It should prove a valuable Pear to grow for market, as its handsome appearance, large size, and fine flavour would be sure to attract buyers.—A. W.

Apple Bramley's.—Shapely and well-ripened fruits of this Apple are very handsome, and it is one of the best late cooking kinds, excellent either as a sauce Apple or for baking, but it is not always so free as may be desired. As a rule, I think, it fruits best on a light or medium soil, and it certainly dislikes very close forms of training. The fruits keep well and are always acceptable in the kitchen. Bramley's is a very strong grower, and when young trees on the free stock are planted they will in all probability require somewhat severe root pruning and the soil made as firm as possible about the roots. I noticed some very nice specimens of this Apple at Ickworth recently.—H. R.

Pear Althorpe Crassane.—This well-known and highly-esteemed Pear was raised by Mr. T. A. Knight. The fruit is medium sized, roundish and irregular in outline, with a pale green skin, which becomes dark brown on the sunny side, and the whole surface is sprinkled with minute white dots. It is an excellent Pear, and should be allowed to hang as long as it will, and then be stored in a perfectly cool room. There it will ripen to perfection and keep for a long time. I have frequently had it in good condition in the middle of January when so stored. If placed in the warm Pear room it comes into use during November and the beginning of December. The tree is a vigorous and hardy grower, bears freely, and succeeds well either as a standard or bush.—S. E. P.

MENABILLY.

IN a county so favoured by its position and its climate as Cornwall there are many excellent gardens containing treasures in the way of plants but seldom met with elsewhere. Even in that favoured county gardens like that at Menabilly are very rare, and many of the plants cultivated there cannot be seen anywhere else; at least, not in the same perfection. Menabilly, the property of Mr. J. Rashleigh, is situated about a mile and a half from Fowey, and perhaps $2\frac{1}{2}$ miles or 3 miles from Par. From the Fowey side a most pleasant carriage drive winds through extensive woodlands and valleys, the owner's taste, and especially his love for beautiful plants, being apparent everywhere, and the arrangement of the plants entirely without that stiff formality which jars upon the feelings of those who love Nature in her simplest forms.

All the year round a visitor to Menabilly—provided he is a lover of plants—will find something to interest him, and most probably something he has never seen before. In the spring-time thousands of Daffodils and other bulbous plants dot the grass; in summer, flowers and flowering shrubs of every description adorn the grounds. Among the late or autumn-flowering shrubs are many thousands of Hydrangeas which abound everywhere, and nowhere else have I observed their handsome trusses of flowers of a deeper shade of blue. Even in winter the attractions of Menabilly are manifold owing to the great variety of rare evergreens—Dracenas, Palms, coniferae, and last, but not least, its Bamboos, which include every variety that is known to succeed in Great Britain. The illustration (p. 480) depicts a group of *Gunnera manicata* and *Osmunda regalis* (Royal Fern), which is passed on our way through the drive mentioned above. There are larger Gunneras in Cornwall, but it is questionable whether any of them occupy a more telling position than the group here illustrated, which grows on the fringe of a stream.

Bamboos are everywhere, and the specimens most conspicuous for their size and graceful beauty are *Arundinaria nobilis*, *Phyllostachys viridi-glaucescens*, *Arundinaria nitida*, and others. Not far from the house is a Bamboo garden proper, which is the pride of its owner and the envy of his friends. The love of the owner for his plants is manifested by the careful way in which every plant is labelled by an inconspicuous, but indestructible tablet of zinc. Among the gems of the collection are the true *Arundinaria falcata*, which is but seldom seen out of doors, and varieties like *Arundinaria nobilis*, *A. nitida*, *A. gracilis*, and *Thamnocalamus Falconeri*, which are never seen in the midlands in such a state of perfection as at Menabilly. Magnificent specimens with canes considerably over 20 feet in length may here be seen of both *Thamnocalamus Falconeri* and *Arundinaria nobilis*. Other rare varieties here grown most successfully are *Phyllostachys violascens*, *P. heterocycla*, *P. macrosperma*, *P. verticillata*, &c. The house, which is covered with beautiful creepers, looks out upon an extensive undulating lawn covered in spring by thousands of Narcissi and sheltered on either side by choice trees and shrubs. In the distance the sea is distinctly visible, and it is probably this fact which suggested the name of the "Spy-glass," by which this undulating valley is known. Near the house is a very fine specimen of *Dracæna australis*, which was photographed when in full fruit and is illustrated herewith.

The Palm walk is some 150 yards in length and planted alternately with *Chamærops excelsa* and several varieties of *Dracenas*. The

Dracenas were very fine specimens, 12 feet to 15 feet high, but the severe blizzard and extremely cold winter some five years ago crippled many of the plants, which were partly cut back, while others had to be replaced. Here again the grass in spring is studded by a wealth of Narcissi and other bulbous flowers. Not far from the Palm walk, and in a well-sheltered

ance of Hydrangeas. How fine an effect may be produced by these plants may be judged from the illustration (p. 484) representing *Hydrangea Hortensia* on a bank.

Conifers also play a most important part in this part of the grounds. There are few coniferae unknown at Menabilly, whose owner has devoted to this class of plants much tender care. Conspicuous among rare conifers is *Arthrotaxis laxifolia*, known as the Jointed Yew, from Tasmania. The specimen illustrated (p. 477) has bright green foliage and is 18 feet or 20 feet in height. *Pinus Montezumæ* (see illustration on p. 481) is probably the finest specimen of its kind in Great Britain. It was planted by Mr. Rashleigh in 1874, and it was then only 2 feet high, but measured 25 feet in height and 5 feet in girth in 1894. At the present time this handsome native of Mexico is of course still much larger and its needles are 9 inches to 10 inches in length. Of other handsome coniferae I will only mention the elegant *Taxodium distichum sinense pendulum*, and fine specimens of *Podocarpus Andina*, *Sciadopitys verticillata*, *Larix Kæmpferi*, and a host of others too numerous to mention.

Rare shrubs of all kinds also form a most important feature among the treasures of Menabilly. I noticed a fine bush of *Raphiothamnus cyanocarpa*, which is a native of Chili and has formed a specimen about 18 feet high by 12 feet through. It has dense, Myrtle-like foliage, and at the time of my visit was covered with a mass of berries the size of a pea and bright violet-blue in colour. *Leptospermum scoparium* is another interesting plant. Though a native of New Zealand, it appears to be quite at home at Menabilly, where it has developed into a shrub about a dozen feet in height, and where both its very small Myrtle-like leaves and its reddish lilac flowers are very attractive. *Parrotia persica*, with its drooping habit and its fine leaves just turning scarlet and yellow at the tips, was also an object of great beauty at the time of my visit; nor must I omit to mention the Japanese climbing *Hydrangea* (*Schizophragma hydrangeoides*) some 30 feet high, and clinging like Ivy to the stem of a tree. Its flowers are flesh coloured, and appear in flat cymes some 5 inches or 6 inches in diameter. A Tasmanian "Devil's Pepper-bush" (*Drimys aromatica*) forms a bush about 13 feet in height, and interesting also are *Colletia cruciata*, 10 feet high; *Pittosporum Colensoi*, about 11 feet; *Ligustrum coriaceum*, and many others.

Last, but not least among the beautiful plants at Menabilly is an excellent collection of *Rhododendrons*, mostly of the Himalayan or Sikkim type. The extensive fruit and kitchen gardens as well as the flower garden and pleasure grounds generally are under the care of Mr. Bennett, who is well acquainted with all the plants and their history.

F. W. MEYER.



Dracæna in fruit at Menabilly, Cornwall, August, 1899.
From a photograph by G. A. Champion.

part of the woods, is a deep depression devoted to Tree Ferns. There are eight or more specimens of *Dicksonia antarctica*, evidently feeling very much at home and receiving but very little, if any, protection during winter. At the other end of the Palm walk are numerous choice hardy shrubs, and again we notice an abund-

KITCHEN GARDEN.

PRESERVING ROOTS THROUGH THE WINTER.

It is easy to preserve roots during the winter when one possesses a special place for the purpose, but as everybody cannot afford a suitable root-house or a cellar, in most cases one has to be content with putting the roots into any kind of cellar or into a clamp in the garden. Under such conditions the roots keep fairly well, but there is always the risk of losing some through dryness or rot. There is, however, an easy means of protecting roots from frost. It is little known and deserves to become common, as it is within the reach of all and is specially fitted for preserving Beetroot, Carrots, Celery, Cabbage, Turnips, Parsnips, winter Radish, &c. It should be carried out in the following manner:—

In a part of the garden sheltered as much as possible—along a wall preferably—choose a well-drained rather light soil for the reception of the roots, and having lifted these with care, cut off the leaves half an inch or so from the collar. Select a dry day and dig a trench 3 feet or 4 feet wide, more or less deep according to the length of the roots, and place them in it in a vertical position and so that the collar is on a level with the soil. The roots must not touch each other. The first line completed, fill up the trench and stamp the soil well down over the roots; then open a second trench at a distance of 6 inches or 8 inches from and parallel to the first, and so on with other trenches. The vegetables should be covered as far as the collar, except Turnips, of which the fleshy part should be left above ground.

In private establishments it may be more convenient to employ another way, which permits of the placing together of the kinds of roots for which there is most frequent demand. Thus, instead of digging the trenches across, make them lengthways, putting in a certain number of the most commonly needed vegetables, such as Carrots, Turnips, and in less quantity Celery, Beet, Radishes, Parsnips, so that on opening a trench across one may find a few of each sort of vegetable. This makes it unnecessary to re-open the trench at different places or uncover it in several directions.

On the first appearance of frost, cover the whole surface of the plot, and for about 12 inches to 16 inches around, with dry leaves or manure about 8 inches deep. If the cold increases, double the depth of the covering so as to prevent the soil from becoming frozen. Whether the soil has frozen or not can be ascertained by thrusting a stick through the layer of leaves or manure. In time of thaw remove the covering with a fork, but hold it in readiness for replacing on the first occasion. In winter and until the spring, unless there is very severe and prolonged frost, vegetables can be taken out as required by simply removing the covering of the trench and lifting them with a spade or fork, replacing the covering afterwards.

We find this plan of wintering vegetables very successful in the case of Milan Kale and Broccoli, the plants being placed in lines with the heads inclined to the north, after having previously removed the large outer leaves. In frosty weather we protect the ground with worn-out matting, covered with manure or leaves, and uncover during thaws.

The gardener who can spare empty frames in winter (as frequently happens) may simplify operations greatly by planting the roots in

lines in well exposed beds in boxes, covering these over with the frames and matting during frost. It is well to surround the boxes with manure also if the cold is very severe. In these conditions the work of removing the vegetables is easier and cleaner.

In addition to its extreme simplicity, this plan of wintering vegetables has the great advantage of keeping the roots as fresh and sound as if they had been gathered in season.—*Revue Horticole.*

Globe-shaped Beet.—I saw a breadth of globe-shaped Beet on trial at Chiswick in 1898 which greatly pleased me. Last spring I procured seed of this variety with the view of giving it a trial in the gardens here. As is usual when novelties are sent out, the seed supplied was none too plentiful, but by economising it to the fullest extent and sowing two seeds only about 1 foot apart, several rows of plants were ultimately secured. These have done well, the roots being quite true in shape and like those grown at Chiswick. Some were pulled for use during August and September, and the remainder were lifted and clamped a fortnight ago. When cooked the flesh is of fine colour, very tender, and of good flavour. In my opinion it is so superior to any of the flatter forms or Turnip-rooted Beets, that the latter will therefore not be grown another year.—A. W.

Tomato Ham Green.—I have grown nearly all the so-called new kinds, but for general crop I find nothing to surpass Ham Green. What we want is a variety that produces plenty of nice smooth fruits rather under than over a quarter of a pound each. The colour of this variety is all that can be desired, and I think that if a vote were taken on a dozen varieties of the best-known Tomatoes, Ham Green would head the list—at least amongst growers for profit. Culture has a more marked effect on the Tomato—at least in a short space of time—than on many other fruits or vegetables, for it is such a strong rooter and gross feeder, that it shows in a few days the effect of applications of artificial food. During the past season I had plants of Ham Green Tomato that produced beautiful even-sized fruits, about six to the pound, for some distance up the stems, but on giving a few good doses of guano the fruits took on quite a different character—in fact, quite unlike the first gatherings. On ceasing to give stimulants, the latest gatherings were of just the shape and size that are most sought after by the public.—J. GROOM, *Gosport.*

Corrugated versus smooth Tomatoes.—I think too much importance is attached to the smooth varieties of Tomatoes, that is, where the produce is required for cooking. It may be fancy on my part, but I think the corrugated varieties have the best flavour, at least as a rule. Is there yet a better flavoured Tomato than the old Dwarf Orangefield? I think not. More than that; were I planting simply for home use and could ensure a true strain, I would, if confined to one variety, grow Orangefield. Laxton's Open-air, another rugged-looking fruit, is of excellent quality, and the crop I saw last autumn in a private garden trained up stakes was enormous. Carter's Outdoor belongs to the same section and is a most reliable variety. In looking over the very interesting and instructive notes on Tomatoes in THE GARDEN I was pleased to see Mr. Challis and one or two others speaking favourably of Regina. As a smooth, handsomely shaped, heavy cropping Tomato either for indoor successional work or in the open air, I know of few to equal it.—N. N.

Flat v. sloping borders.—From the point of view of the fruit trees, "A. W." is doubtless quite right in his argument against sloping borders, but in the kitchen garden small beds raised to the sun are very useful. Not only do the young growing crops get the full advantage of the sun, but when these are thrown up in the open the small bank formed at the back of each

materially protects them against cold winds. Where the position is exposed, beds for sowing small early salads, especially Radishes, followed on the same ground by young Carrots, and later by Parsley, may be thrown up 3 feet wide in a crescent shape, the back facing north and east, the front south and west, and they are very valuable. In gardens facing the south and protected by good walls, all that is necessary is to let the beds run east and west in a straight line. Besides forming a wind-break, the back of each bed forms a convenient place to rake any covering material used into on fine days. This plan is much affected by market men in the west of England for the crops referred to, and with excellent results. It may be followed with advantage in private gardens having a light soil for the culture of the crops named, also for early Lettuces and Turnips, all this saving frame room in spring.—H. R.

Coal ashes for Potatoes.—"G. H. H." and "W. S." are both perfectly right as to the abuse of coal ashes for Potatoes, but in my note I recommended them for mixing with the compost used on Potato ground in conjunction with other things, and as an addition I can very strongly recommend coal ashes, if only as an opening medium. As to their having no manurial value, I consider this at least not proven, for who has not noticed the way almost every description of plant roots into coal ashes, the roots ramifying freely, the plant in many cases being improved in health? When used fresh and in the ridiculous manner mentioned by "W. S.," coal ashes are undoubtedly injurious; so they are as a covering to bulbs after potting, but when moistened and weathered, as they would be if used as I recommended, they are good for either purpose. Not only this, but the scabby appearance of Potatoes grown with coal ashes in the soil is not always due to the presence of these, unless, as I say, they have been used fresh. Most of the cottagers hereabouts, and in many other parts of the country for that matter, are in the habit of throwing ashes and all the manure they can get into a heap and dressing their gardens and allotments with the mixture. Many of them grow exceedingly good and clean samples by this judicious use of a waste product.—H. R.

Winter greens.—But a few weeks since market growers were congratulating themselves on the almost luxuriant appearance of all descriptions of winter greens resulting from the earlier autumn rains. In every direction Brussels Sprouts, Savoy Cabbages, Kales, Coleworts, &c., were then looking so well as to lead to the belief that the anticipated scarcity resulting from the long drought of the summer would not exist. But the intervening weeks seem to have wrought a distressing change, as it is now complained that aphids is so rife in all descriptions of green stuff, that large breadths have been rendered not only unsaleable, but are being destroyed. The best thing to be done in such cases seems to be to turn sheep on to the breadths and let them eat up green stuff and insect pests. After the very heavy rainfall earlier in November it was naturally thought that all descriptions of vegetation had been pretty well cleansed. But the reverse seems to have been the case, for later dry weather has helped to breed the aphids wholesale, and their presence is now far in excess of anything old vegetable growers can remember. No doubt the visitation is due to a legacy of the dry season which bred these insects and enabled them to re-breed in the most liberal way. Aphid-infested green stuff is of course unsaleable. Those who have purchased such matter have found that there is no means of cleaning the vegetables without literally pulling all to pieces, and even then the labour is great. It is hoped that this trouble is not widespread. It seems to be bad enough in West Middlesex.—A. D.

Onions.—A great quantity of Onions has been hawked about the streets of our county town during this autumn, and the vendors seem to experience but little difficulty in getting rid of them. The persons selling them appear to be French sailors, and they come by rail, no doubt,

from some of the nearest seaport towns. The Onions are neatly roped together, each rope being from 3 feet to 4 feet long, and they carry them on long poles balanced on the shoulder. From what I have seen it is mostly people attending the market who become customers, but I have not been able to ascertain the prices at which they are disposed. They must be grown at a very cheap rate indeed to enable them to be brought

of Onions might be grown, and to have to buy them from the foreigner is, to say the least, anything but creditable. While writing on Onions I might here remark on the excellent firm condition of the home-grown bulbs this season. They are not so large as usual, through the effects of drought and not having had them thinned out quite so much as in former years, but the aggregate weight is quite as heavy. They should keep well, but



Arthrotaxis laxifolia at Menabilly.

to this country, to be afterwards hawked about in the manner described, for the men's travelling and other expenses have to be provided for out of the proceeds of the sales. There should not be the slightest necessity for Onions to be imported into such a country district as this, as all that is required for home consumption and a very great deal more might easily be grown at home. On the fertile soil which is so suitable for Hops, cereals and fruit in abundance splendid crops

unfortunately, through their having been ripened up so thoroughly, but little or any tops remain on them to enable their being tied and afterwards roped. This is a favourite method of mine of keeping Onions for late use, but it will be but few that will be suspended this season. The alternative is to keep the bulbs thinly spread out and as cool as possible, and to give them a turn over on wet days or whenever opportunity offers.—A. W.

EARLY POTATO CULTURE.

Few things in the kitchen garden require greater care and skill than the production of good crops of early border Potatoes. Some ignore it, asserting that results do not justify the time and labour incurred, but in reality a half-hearted method of culture is generally responsible for failure. Of course, in low-lying damp situations and in gardens having cold subsoils, early Potato production is practically impossible unless more than usual pains are taken; indeed, in the best situated gardens and in warm, genial soils it is no child's play. One of the most important points in early Potato culture is early preparation of the plot and the incorporation of sufficient opening material to secure a speedy and free root-action. I like to keep the border well elevated, adding the necessary ingredients, such as Mushroom manure, burnt refuse, sweepings of walks and drives and wood ashes. Strong farmyard manure is best omitted at this period, being used later on for successional crops on the same border. I like to ridge the border up to the action of frost and wind, levelling it previous to planting, say in March. This exposure ensures the crumbling of all lumps, kills insects, and sweetens and improves the soil generally. A south aspect is the best and shelter from cold cutting winds imperative, such working much greater mischief in the earlier stages of growth than ordinary frost.

The preparation of the seed tubers is of great importance. Some think sprouting to any degree unnecessary, and even injurious, but while having a decided objection to placing the seeds in intermediate houses and forcing the sprouts unduly, I know from experience that tubers having short, stubby growths when planted mature earlier, if not better crops than seed minus growth. Of course, to bring seed from a warm Peach house or vinery and plant at once in open-air positions is to court partial failure, yet such is often done. From the moment the seed-tubers of extra early Potatoes are sorted from the eatable ones in summer, they want careful watching. I cannot say I am in favour of spreading them out on the ground in order to become greened and, as some think, matured. It may do when the object is pot culture, as then potting or boxing usually takes place in December and early sprouting is not such an evil. The open-air exposure referred to induces, I think, early autumn sprouting, the new growths if left on being far too forward for March planting, their frequent removal, on the other hand, of necessity materially weakening the tuber. The best way is to lay them out thinly in quite cool shady quarters, examining them at intervals and if possible arranging them in boxes for convenience sake. The short-topped early sorts grown now-a-days will need no forcing to form sprouts sufficiently long for March planting, but if any assistance is needed the warmth of an ordinary sunny greenhouse will suffice, a few days' confinement in a cool frame or pit previous to planting further hardening them. Even when desirable to lift eatable tubers at the earliest possible date it is not wise to adhere to any particular date for planting. The general condition of the weather and ground should decide this. I have before advocated planting shallow and drawing slight mounds over the drills, as these extra early short-haulmed varieties do not root deeply. A little leaf mould and fine loamy soil well mixed strewn over the seed favour a good start and prevent decay. From a couple to three growths to each tuber are sufficient, producing as much foliage as can be properly exposed to sun and air, even when crowding the rows is avoided. Rough-and-ready protection in spring is better than none at all, but it can hardly be expected that a few evergreen boughs, although effectual in the case of Cauliflower and Peas, will save the tender susceptible growth of Potatoes from maybe a dozen degrees of frost. Wood is cheap, and a home-made rough frame with cross rails is easily erected and can even remain up permanently. Cheap stout canvas, oiled to preserve it from the weather, forms the best covering, care-

ful and constant attention being paid to covering and uncovering. NORWICH.

Greens and caterpillars.—Usually we expect to get rid of the caterpillar plague when the cooler weather sets in. Only the other day, the middle of November, I examined a breadth of Brussels Sprouts, and was surprised to find the plants badly infested with caterpillar. No time has since been lost in getting them picked off. Aphides are also giving trouble this season, particularly among Brussels Sprouts. Here and there I have observed plants less healthy and vigorous than the rest entirely covered with aphides, which also infest the sprouts up the stems and render them unfit for use. A few sharp frosts would, of course, put an end to these plagues. In the case of sickly greens stricken with aphides the best plan is, I think, to pull them up and burn them.—H. H.

Shortness of winter Turnips.—The summer and autumn drought rendered the growth of Turnips almost impossible in gardens short of water and where the soil is of a light description. These troubles if they came alone might be surmounted to some extent, but it was not to be, by reason of the intervention of the Turnip fly. Frequent dustings of lime and soot in a dry state had no material influence, and Elder boughs brushed over the surface in the early morning—usually a good preventive—failed in many cases this season. The seedlings, even before they have fully developed the seed-leaf, disappear as if by magic when the ground is overrun with these destructive pests. The result of this is now felt in the scanty crop of roots available for daily use. It is only from favoured districts from which a supply comes. I cannot recall another season when there has been such a poor crop, or such a general outcry from growers and consumers of the dearth of good Turnips.—W. S.

Marrows without manure.—It seems to be a generally accepted, and I may add old-fashioned, theory that Marrows to succeed well must be grown on a manure heap, or, failing this, they must have a heavy dressing of farmyard material applied to the ground before planting. Doubtless good Vegetable Marrows are grown by such treatment, but to say they cannot be cultivated well without it is a fallacy. In the past two dry seasons I have succeeded in growing heavy crops of Marrows without manure and also without water. I put out a number of Marrow plants that had been raised in pots on an open, fairly retentive piece of ground that had been done moderately well for a previous crop. The result in both seasons far exceeded my expectations. The plants did not make the giant leaves and sappy growth which are often the result of strong manure, but the shoots were sturdy and short-jointed. By cutting the fruits as they attained to a serviceable size the plants were relieved of the extra strain, and they continued bearing heavily till frost destroyed them.—H. H.

Celery Major Clark's Red.—This variety of Celery is hard to beat for general purposes, especially for use after the end of November. This season late Celery ought to keep particularly well, as, owing to the absence of severe frosts, it has been easy to leave the soil low on the ridges. But it is not safe to leave it any longer, and if the earlier mouldings have been properly done it is very little trouble to finish all off neatly. I usually make the men use a garden line, twisting this around each head as they go, as this enables two men to work at the row, one each side, and prevents the sticks being bent or the earth finding its way down to the heart. It is less trouble than either tying up each head with raffia or setting a man to hold each, in which case only one side of the ridge can be done at a time. The kind above named has abundance of good outer leaves, and though requiring more room than the very dwarf varieties, is well worth it. The rows should for late work be 4 feet apart, and these, if possible, ought to be got out very early in spring so that they are well weathered. The small

plants may then be pricked direct into the trenches, and such I always think keep better than those which are pricked out and again transplanted when large.—H.

Cabbage Old Essex.—By the courtesy of Mr. Beesley, of Denbies, I have received a dish of Cabbage under the above name, interesting to me as having been introduced from Claremont to the neighbourhood of Dorking more than seventy years ago and grown there ever since. It is a small, firm Cabbage, of conical shape, of very mild flavour, so much so that it is evident our forefathers from this standpoint had quite as good an article as we can produce to-day. Mr. Beesley tells me he sows it with the Coleworts about the middle of June, and has an abundance of small firm heads right away till Christmas from the first cutting. It should be equally serviceable for February sowing to furnish summer cutting. As 15 inches each way is plenty wide enough to plant, it should be an ideal Cabbage for small gardens. Among the small quick-growing Cabbages, I have not met with one just like this, and shall be glad to know if it is still in commerce.—E. BURRELL.

Brussels Sprouts.—I have had an opportunity this year of trying many (so-called) different varieties of Brussels Sprouts, and have come to the conclusion that in the majority of cases there is very little to choose between them. It would be well if a thorough trial of the same could be made at Chiswick with the view to determine the best types and the many synonyms. Personally I much prefer a dwarf strain, say not more than 30 inches or so in height, always provided, of course, that the stems are well clothed with firm, solid sprouts. The tall-growing varieties may be very well in sheltered situations, but if exposed they are, unless well earthed, very likely to blow over, materially affecting the well-being of the plants besides giving an untidy appearance to the quarter. A good strain of Scrimgeour's Giant is, I think, still one of the best to grow. The extra size of the sprouts may be objected to for some purposes, but this might form the bulk of the crop, and the variety known as the small French be grown for special requirements. This is a tall-growing sort well clothed throughout with exceptionally solid sprouts. In common with most things, the Brussels Sprouts suffered this year from the protracted drought. They were a long time from the planting in making their growth, and during this spell of inaction aphids got a tight hold, making them dirty and necessitating a good washing before sending them into the kitchen.—E. B.

Late Broccoli.—In a season when the earlier planted green stuff had difficulty in making headway, and in many cases is smaller, less productive at present, and likely to be so, it is gratifying to record a signal success with late Broccoli, which never looked better, and which, given a favourable winter, is likely to furnish some very fine heads. Having a light, sandy soil to deal with, the Broccoli has been planted for the last ten seasons on ground previously cropped with late Potatoes. In this particular instance the Potatoes were lifted rather late in the autumn of 1898, the ground well loosened between the rows, and left, save for occasional attentions with the hoe, until the plants from the May sowing were ready. It had settled down dry and hard, necessitating the use of a short crowbar to make the holes. Sufficient space was left after the plants were filled in to allow for a thorough soaking of water, and although from the time of planting until late in October we had no rain, they came away well and covered the ground, presenting just the appearance one likes in a brake of late Broccoli, viz., a close, sturdy habit with big, stout stems and vigorous foliage. It may be noted that care should be taken in crowbar planting not to make the holes too deep, as if this is done the soil is not always well settled about the roots. The three best for general excellence are Maincrop, Champion, and Miller's Dwarf Late White. In these days when new sorts are

annually offered in such profusion, the last-named of the above trio is apt to be neglected. It is, however, a very good variety, dwarf, compact, and hardy, yet vigorous in habit and throws very fine heads.—E. BURRELL.

ORCHIDS.

NATURAL HYBRID ORCHIDS.

(WESTERN SECTION.)

THE Western section of natural hybrids in most cases surpasses in point of usefulness and beauty those which have been previously dealt with as the Eastern section, and is, therefore, from a garden point of view of far more interest than most of the Old World products, and in point of value among the most cherished and highly prized among Orchid experts.

BIGENERIC NATURAL HYBRIDS.

One of the earliest of the natural hybrids to make its appearance was

Laelio-Cattleya elegans, discovered in 1847 on the island of Santa Catherina. It has since been collected, and is now frequently imported from other localities of Southern Brazil. All the forms were originally distributed, and are perhaps best known in gardens at the present day as *Laelia elegans* when referring to the varieties with deeply coloured flowers, while the lighter tinted varieties are recognised as *L. e. alba* and *L. e. Schilleriana*. In the district above referred to three well-known species occur, and, in certain localities at least, they grow intermixed. These are *Laelia purpurata*, *Cattleya Leopoldi*, and *C. intermedia*. It is interesting to compare the characteristics of the offspring with the combined characters of the two parent species. In growth some of the pseudo-bulbs bear a single leaf, as in *Laelia purpurata*, and others a pair, as in the *Cattleya* parent, while in shape they are intermediate, or incline towards one or the other parent. The same remark applies to the flowers both as regards shape and colour. There can be little doubt as to their origin, and the distinctive characteristics are plainly visible. The dark varieties, or *L.-C. elegans* proper, are derived from the intercrossing of *Laelia purpurata* and *Cattleya Leopoldi*. The light forms originally distributed as varieties of *L.-C. elegans* have been proved under artificial hybridisation to have their origin in *Laelia purpurata* and *C. intermedia*, and are now described as

Laelio-Cattleya Schilleriana. The white form originally appeared in 1855 in the collection of Consul Schiller, of Hamburg. The original form had white flowers and an obscurely three-lobed lip, the front lobe and tips of the side lobes amethyst-purple, a purple line along the disc and a little yellow in the throat. Around the original form many variations are grouped, which is less numerous than in *L.-C. elegans* have been more misunderstood. *Laelia elegans alba* (THE GARDEN, vol. xvii., p. 132, t. 218) belongs here. *Laelia Wolstenholmei*, *L. Stelzneriana*, *L. Mesuresiana* and *L. e. Warneri* must also come under this heading as varieties of *L.-C. Schilleriana*. It is worthy of note that neither of the parents was known at the time of the advent of *L.-C. elegans*. Other bigeneric hybrids between the closely allied species *Laelia* and *Cattleya* have since made their appearance.

L.-C. albanensis was supposed to have its origin between *C. Warneri* and *L. grandis*. It appeared with Messrs. F. Sander and Co., St. Albans. The sepals and petals are light rosy-mauve, the front lobe of the lip rosy-crimson with some radiating veins through the margin, which is rosy-lilac. The side lobes are also rosy-lilac with some yellow at the base and brownish-purple small lines through the throat. The parentage has been confirmed by the flowering of a hybrid at Brussels.

L.-C. amanda originated with Mr. W. Bull. It is a supposed natural hybrid between *C. inter-*

media and *L. crispa* or *L. lobata*. The sepals and petals are pale rosy lilac, the front lobe amethyst-purple, with a lighter margin, the side lobes rosy lilac, shading to yellow, with radiating reddish streaks through the base. *Cattleya Rothschildiana* is a synonym of *Lælio-Cattleya amanda*.

L.-C. Gottoiana is derived from the intercrossing of *L. tenebrosa* with one of the *C. labiata* section, probably *C. Warneri*. The flowers are nearly as large as in *Cattleya Warneri*, the petals narrower and more acute, and their colour as well as that of the lip is a uniform bright rose-purple. There is a little deeper colouring on the disc of the lip, but the yellow blotches so familiar in the throat of the *Cattleya* parent are quite obliterated. It was first exhibited on June 23, 1891, and was awarded a first-class certificate by the Orchid committee of the Royal Horticultural Society, coming from the collection of Mr. E. Gotto, Hampstead Heath, having been imported as *Lælia tenebrosa*. The variety *L.-C. G. rosea* appeared later with Messrs. F. Sander and Co.

L.-C. Pittiana is a supposed natural hybrid between *Cattleya guttata* Prinzi and *L. grandis*. The sepals and petals are creamy white, tinged with rose, and having a few minute dots of crimson; the front lobe of the lip rich crimson-purple, the remaining portions nearly white. It is a most distinct hybrid.

L.-C. Oweniæ is a supposed natural hybrid, having *L. Perrini* as one of its parents. It has dark rose-coloured flowers and the tube of the lip white. A plant was exhibited by Mr. G. D. Owen at the Royal Horticultural Society's meeting, August 23, 1894.

L.-C. Porphyrites was brought by Mr. J. Day from Brazil in 1884. The presumed parents are *L. pumila* and *C. Dormaniana*. The sepals are greenish purple, petals pale purple; the lip has its front lobe rich purple, with a white disc, the side lobes light purple, becoming almost white at the base.

These comprise all, or nearly all, the natural hybrid *Lælio-Cattleyas*. They include many beautiful varieties, and will form subjects of interest for the hybridist to determine definitely what are at present only suppositions as regards the parentage.

NATURAL HYBRID LÆLIAS.

Lælia Crawshayana is undoubtedly a natural hybrid between two of the Mexican species, five of which appear to grow almost together. These are *L. anceps*, *L. albida*, *L. furfuracea*, *L. autumnalis*, and *L. majalis*. *L. Crawshayana* is probably derived from *L. albida* and *L. autumnalis*. The sepals and petals are bright rose-purple, the front lobe of the lip deeper purple, veined with a darker shade of purple, the side lobes purple, shading to yellow towards and through the base. It first appeared in the collection of Mr. De B. Crawshay at Sevenoaks, and has also made its appearance in other collections since.

L. Eyermaniana is a supposed hybrid between *L. majalis* and *L. albida*. It first flowered in Messrs. Sander and Co.'s nursery at St. Albans, but has since proved to be fairly distributed.

L. Finckeniana is one of the rarest and most distinct of this section of natural hybrids. It first flowered in the collection of Mr. C. W. Fincken, Hoyland Hall, Barnsley, in 1892. It is no doubt derived from *L. albida* and a white form of *L. anceps* of the *L. a. Dawsoni* section. The sepals and petals are pure white, the ground colour of the lip also white. The front lobe has a crimson-purple blotch, and the side lobes are striped with radiating purple lines. It was awarded a first-class certificate by the Orchid committee of the Royal Horticultural Society on December 12, 1893.

L. Gouldiana is a supposed natural hybrid between *L. autumnalis* and *L. anceps*, but has appeared in such large quantities that it seems almost impossible to be of hybrid origin. It has

the undoubted intermediate characteristics of the two species, and is too well known to need description here.

L. leucoptera appeared with M. Peeters, of Brussels, in 1884. It was described by Reichenbach as *L. Crawshayana* var. *leucoptera*. It is more probably a hybrid between *L. albida* and *L. furfuracea*.

L. venusta is another hybrid of this section, having the intermediate characters of *L. furfuracea* and *L. autumnalis*. It first appeared in Messrs. J. Backhouse and Sons' nursery at York, afterwards passing into the Downside collection of Mr. W. Lee, where I noted the plant in flower.

L. lilacina has pale lilac sepals and petals, the side lobes of the lip white, marked with purple lines on the inner side, the front lobe bluish-white, with a purple blotch in front. It is supposed to have its origin between *L. crispa* and *L. Perrini*.

L. Wyattiana is probably extinct. It is supposed to have been a cross between *L. crispa* and *L. lobata*; the sepals and petals white, the front lobe of the lip deep purple, becoming yellow through the base of the side lobes. It appeared in Mr. Neville Wyatt's collection at Cheltenham.

NATURAL HYBRID CATTLEYAS.

Cattleya Brymeriana is a supposed natural hybrid between *C. superba* and *C. Eldorado*; the sepals and petals are rosy purple, stained with white, the front lobe of the lip deep purple, shading to yellow on the disc, the side lobes mauve-purple, shading to yellow at the base. It was introduced through Messrs. H. Low and Co. and named by Reichenbach in 1883. Of

C. Hardyana, the parentage has been confirmed by Mr. N. Cookson. It is one of the most beautiful of all the hybrids. It is very variable and must be fairly plentiful, judging from the manner in which plants have turned up among importations of *C. Warszewiczii* (gigas) and *C. Dowiana aurea*, from which species the hybrid has its origin. The characteristics of the species are wonderfully combined in the offspring. It is much sought after and a valuable plant.

C. Massaiana is a form of *C. Hardyana*.

C. intricata is a supposed natural hybrid named by Reichenbach between *C. guttata* and *C. intermedia*.

C. Krameriana is supposed to have its origin in *C. intermedia* and *C. Forbesi*. The sepals and petals are bluish, suffused with pink, and pale green above; the lip bluish, reticulated in front with rosy purple.

C. Measuresi has its supposed origin in *C. Aelandiæ* and *C. Walkeriana*.

C. Patrocini has the intermediate characteristics of *C. Loddigesi* and *C. Leopoldi*. It first appeared in the collection of Herr Rucker-Jenisch at Hamburg.

C. reoplendens, which originated with Messrs. H. Low and Co., Clapton, has the intermediate characters of *C. guttata* and *C. Schilleriana*, from which it is supposed to be derived.

C. venosa is a distinct hybrid. The combination of *C. Harrisoniæ* and *C. Forbesi* has a quaint effect.

C. Victoria Regina, a charming addition to the natural hybrids, is supposed to have its origin in *C. Leopoldi* and *C. labiata*. It was introduced through Messrs. F. Sander and Co. in 1892, and has since turned up in other collections, although the plants originally distributed proved to be in the majority of cases nothing more than *C. Leopoldi* and *C. granulosa*. In the hybrid the flowers have the exact intermediate characteristics of these species. Another closely allied variety is

C. Imperator, exhibited by Messrs. Linden, of Brussels, as *C. Le Czar*. It received a first-class certificate October 27, 1896. Particulars will be found in THE GARDEN certificated list of plants for that date. It has larger flowers and the lip is more deeply divided than in *C. Victoria Regina*. It is a supposed hybrid between *C. labiata* and *C. granulosa*.

C. Whitei has its origin no doubt in *C. Schilleriana* and *C. labiata*. The sepals are deep rose,

tinged with olive-green; petals deeper in colour; the front lobe of the lip purple, with deeper purple veins; the side lobes pale rose-purple, with some yellow at the base. It was introduced by and named after White, one of Messrs. H. Low and Co.'s collectors. A plant of this lovely natural hybrid from the Clare Lawn collection of Sir F. Wigan, which was thought to differ from the original variety and received an award of merit as *C. Whitei* (Wigan's var.), was recently exhibited at the Drill Hall. H. J. C.

CATTLEYA HARRISONIÆ.

THE fine mild autumn has been all in favour of *Cattleyas*, and this beautiful old species has been, and still is in many instances, flowering with all its accustomed freedom. Really good forms of it are exquisite Orchids, and few can compare with them for beauty. Even the poorest form is well worth growing, and its culture is fairly easy when once the leading principles of Orchid growing have been mastered. All the erect-growing *Cattleyas* with thin stems show a disposition to weakness if allowed to remain long in a close or worn-out compost. They are vigorous enough as long as everything is kept sweet and open about them, but if the centre of the plant, for instance, is allowed to get bare, so that the new material can only be placed about the sides, there will never be another healthy root there, and the best thing to do is to break the specimen up into so many pieces and set each growing on its own account, or else re-moss it after removing the old and decayed portion. One thing is absolutely necessary in thus making up plants. All the young growths should as far as possible be selected of about the same strength, while any exceptionally strong or very weak ones may be kept and potted singly.

Very often by these means plants that have been languishing for years may be brought back to a thoroughly healthy state, and the small, weak bits that are removed at the time go on and improve, eventually reaching flowering size themselves. I have in so many instances lately seen plants of this species doing well on blocks of Tree Fern stem, that I cannot but think there is something specially suitable to *Cattleya* roots in this material. One seldom sees a really unhealthy plant of any *Cattleya* upon it, unless, of course, it has been very badly treated in some other way or is covered with insects, and the semi-rambling habit of *C. Harrisoniæ* especially fits it for this method of culture. Respecting position, it is a native of Brazil, and the useful intermediate house suits it admirably. It must be kept well up, so that the plants get to the full the advantage of sunlight and air, for all the year round it delights in sunshine, provided it is not sufficient to harm the foliage. A little uncertain in its flowering season, *C. Harrisoniæ* should have the pseudo-bulbs well ripened after the flowers are past, and from this until spring should if possible be kept dormant.

Lælio-Cattleya Statteriana.—This is a fine winter-flowering hybrid, and we could do with a great many more like it. The original form was raised from *Cattleya labiata* and *Lælia Perrini*, and although it is a variable hybrid, I think the majority of the forms I have seen more nearly resemble the *Lælia* parent, a potent factor in hybrids wherever it has been used. The sepals and petals of a fine form now before me are rose, the lip with a dense purple front lobe and white and yellow throat—a lovely flower. Its treatment may easily be deduced from a study of its parents, both well-known kinds.—H. R.

Cypripedium Leeannum.—As a garden plant there are even yet few among the hybrids to beat

this, its large, clear-cut blossoms, with their fine dorsal sepal, being as showy as any in the genus. Its capital constitution is all in its favour, small bits of it soon growing into fine plants when properly treated. Like all hybrids of the older class, the flowers in different plants vary a great deal, this being on account of the many different varieties of the old *C. insigne*, from which it has been raised. But a poor *C. Leeanum* hardly exists, for every one is useful to grow for cutting from at any rate. It thrives best in an intermediate house, with ample moisture supplies all the year round.

Dendrobium sanguinolentum.—Although this species has been known for over fifty years, it is not even now by any means common; indeed, it is seldom seen. Chiefly towards the end of the tapering pendulous stems the flowers are produced in short racemes of two or three. The colour of the sepals and petals is pale yellow, with the ends blotched more or less with purple, while the lip is also blotched with purple. It likes ample heat and moisture, and, in order to ripen the growth, may be suspended from the roof in medium-sized baskets, well drained, with a compost of equal parts of peat and Moss. It is a native of Ceylon.

Odontoglossum Cervantesi punctatissimum.—In this variety the pretty rosy pink markings, as seen in most others of the species, are thickly placed over the whole surface of the sepals and petals, and in a good form the individual flowers are large and of great substance. Unfortunately, it is not plentiful, but it is just one of those things that may turn up among any importation of the species in numbers, and thus bring the price of it down. Its culture is the same as for the type, and it likes a small pan suspended from the roof in the cool house. The roots should not be severely dried at any time, and frequent small additions to the compost are necessary to keep the pseudobulbs from rocking about.

Oncidium cheiroporum.—This charming little plant is again in flower, and it is one of the brightest of those that bloom now. As a garden plant it has obtained a bad name, but this is in some instances the fault of those who have it in charge. Many of these cool *Oncidiums* cannot stand the same winter cold that *Disas* and *Masdevallias*, or even *Odontoglossums* can, and it is much better to keep the cool house at a minimum temperature of 50° than to let them be injured.

Except in the very coldest weather this would not necessitate heavy firing, and would certainly not be sufficiently high to harm any other plants. A great variety of Orchids could be safely wintered in such a house. *O. cheiroporum* should not be given a large receptacle or much compost, as large plants of it are seldom seen. Owing to its liability to damp, the pans or baskets containing it should be kept well up in the house and the usual compost of peat-fibre and Moss suits it well. If the pans are well drained so that it soaks easily away, ample moisture supplies are necessary, but such a small-growing plant is easily injured by an overdose of water when the compost is not perfectly drained. It is a native of Chiriqui, and was introduced in 1850.

Stock-seed scale on Orchids.—At this time of year this troublesome insect makes its presence known, and I know of no other insect that will so quickly run over a collection of Orchids. One day the plants may be apparently quite clean; the next, or at least a few days after, the young growths will be overrun with this scale, which takes its name from the silvery lining all round it

as seen on the seed of Stocks. Fortunately, although of such rapid increase, it is far more easily got rid of than any other kind. It is the only scale that is injured by fumigation, and even if sponging is resorted to it falls off at a touch, quite unlike the small brown, tightly-clinging scale that affects *Aerides*, *Vandas* and *Cymbidiums*. Again, it does not appear to seek the under side of the leaves so much as some other insects, so that its work is nearly always in sight. Were it otherwise it would indeed be a foe to be reckoned with, for it rapidly eats the very life out of any plant if allowed to remain. No Orchid is safe from its ravages, and although it thrives much better and quicker on soft young growths, yet it is not particular if these are not to be had. *Cypripedium barbatum* and *C. venustum* seem to be particularly tasteful to it, and wherever the least sign of it is noted, remedial measures must be taken without delay.

Stokesia cyanea.—Mr. S. Arnott at page 447 speaks of the inability to flower this plant in the north, while admitting its success in Devonshire gardens. This at least may be expected, though I was not aware it was generally flowered even in that favoured locality. Near London I have never been able to flower it myself, nor, indeed, have I

lateness of the flowering and the sparsity of flowering plants as much as the colour of Stokes' Aster that for several years I raised batches of root cuttings of the plant for this purpose, and by planting in groups in a sunny spot in the rock garden obtained a nice display, though by no means the fulness of its flowering. The same class of plants will give a good return when liberally treated as pot plants, by being plunged in the open and taken to the greenhouse in late September. No plant is more easily raised from root cuttings than this, and none give less evidence of such growth when left alone.—E. J.

GARDEN FLORA.

PLATE 1253.

MECONOPSIS HETEROPHYLLA.

(WITH A COLOURED PLATE.*)

This is a Californian annual which was introduced to Kew two years ago, when it flowered for the first time in the herbaceous garden and ripened seeds. It flowered freely again this year in the rock garden and again ripened seeds freely. From this we may conclude that it is a useful addition to hardy annuals. It was dis-



Royal Fern and Gunnera at Menabilly.

seen a single instance where its blooming may be regarded as accomplished in this part. The most that is obtained is a flower-head or two, certainly not a general flowering of the principal as well as the lateral heads, which, of course, would take some time. The nearest approach to a flowering in my experience has been obtained with frame-protected plants during winter, that is, established pot plants that had been raised from root cuttings during the preceding winter. The lateness of flowering is in no small measure due to the lateness of the plants in the open starting into growth in spring. Where the plants have remained in the rock garden or border all the winter unprotected there is usually damage to the chief growths, that at no time are numerous from the root-stock. When this occurs the season's growth is more or less dependent on a lateral growth bud at the root-stock, and its start is hampered by the damage done to the previous main growth. By protecting the plants in frames during winter, the leaf-growth as well as the crown or heart is retained, and an earlier flowering has resulted by these means. It is to the

covered in 1833 by David Douglas. Although widely distributed in North America, it is not common anywhere. According to Sir Joseph Hooker, *M. heterophylla* is the sole American representative, as *M. cambrica* is the sole European, of a genus which is well represented only in the loftier Himalayas and the mountains of Western China. The best of them undoubtedly is the blue Himalayan Poppy, *M. Wallichii*, a coloured plate of which was published in *THE GARDEN*, vol. xix., 1881. Although described as perennials, I find that all the eastern *Mecopnopsids* are biennials. To maintain a supply of them it is therefore necessary to make an annual sowing of seeds. *M. heterophylla*, in addition to its annual character, has also a distinguishing one in its leaves, which are pinnately divided, whilst in all the other species they are entire or lobed. W. W.

* Drawn for *THE GARDEN* in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



MECONOPSIS HETEROPHYLLA

THE WEEK'S WORK.

KITCHEN GARDEN.

FOR a number of years I used to sow my first early border Peas in January or early in Feb-

plunging the pots in a cold frame. The labour of this is not great; the principal thing needed is plenty of air, as the soil needs very little water until the growth appears. I prefer pots 3 inches or 3½ inches in diameter, draining them by placing a small portion of teased loam or a little leaf-

should be plunged to the rim in either ashes, leaf mould, or cocoa fibre, and the lights put on at night when cold. Chelsea Gem is still one of the best early sorts, and the good old Stratagem if sown at the same time is very hardy, and follows close on the heels of Chelsea Gem. An-

other capital medium height Pea possessing a grand constitution is Wordsley Wonder. It is surprising how this variety will yield under good culture, the individual Peas also being much larger than the majority of white-seeded varieties. The interior of the frame should be examined each morning, as a single mouse will ruin a whole batch in a few days if not detected. I have known Furze branches to be pegged down round the sides and ends of the frames with good results, as mice do not seem to appreciate them. Be careful when watering to thoroughly moisten the soil.

PREPARING FRAME POTATOES.

—It is now quite time tubers of such early forcing varieties as Sharpe's Victor and Ring-leader were placed in order in shallow boxes and given comfortable quarters in a greenhouse or other tolerably comfortable quarters not far from the light, in order that new sprouts may come away strongly and reach the length of half an inch by the second week in January. This is much better in all ways than postponing it until a week or two before they are required for planting, and then forcing them unduly in a warm Peach house or vinery. Formerly I used to cover the bottoms of the boxes with half an inch of leaf-mould, but do not now, as I found the tubers often rooted into the compost, and if not taken out and planted in the nick of time, got such a hold that in freeing them from it many young fibres were torn off. A sprinkling now and then with the syringe to prevent over-dryness will be all that is wanted.

FORCING LETTUCES. — Where plenty of Lettuce in spring is imperative, it is well to sow now seed of any of the small Cabbage varieties and to prick out the seedlings on a gentle hotbed at the end of January. Sow in a pan or box, placing the same in an intermediate house, thinning out as soon as the young plants can be handled, and elevating them close to the roof-glass to ensure a stocky growth. Two good varieties for sowing now are Perfect Gem and Golden Queen, and a pinch of that excellent sort All the Year Round may also be sown. From a two-light frame, raised on a bed of warm leaves and surrounded by linings, very useful hearted produce may be cut in April. Lay on the surface 6 inches or 8 inches of

good garden soil. Of course, plants put into frames in autumn will after average winters afford an ample supply, but as one never knows what weather is in store, it is always best to be on the safe side, salad being so important.

SEAKALE CUTTINGS.—As each batch of Seakale



The Mexican Pine at Menabilly.

ruary, using small pots and placing them in a warm Peach house or vinery until they had grown an inch, then in a cooler house for, say, a fortnight, finally placing in a cold frame to harden off. I have now abandoned that plan, and sow about the middle of December, standing or rather

mould over the crocks. Employ a good stiff loam kept porous by a free addition of road grit. Avoid thick sowing, as crowded plants not only smother each other, but the roots become so entangled that much damage is done if the balls are divided at planting time in March. The pots

is prepared for forcing, the root thongs should be saved and cut into lengths some 6 inches long, laid in a box or frame and covered with sharp, fine soil to induce an early callus and sprouting. When sufficient has been saved for the earliest batches, the rest may be laid in out of doors, the foot of a south or west wall being the best position. Some lay them in roughly at trimming time and cut them into lengths later on, but this makes growth later and is no saving of labour. I still think the old variety unsurpassed for very early forcing, as it seems to start into growth more readily provided the crowns are well matured. Lily White is a grand Seakale and looks very delicate when dished up for table. Those whose stock is still confined to the original should certainly procure Lily White.

EARLY RADISHES.—It is possible to obtain nice tender Radishes early in the new year by sowing now on a mild hotbed and covering with a frame. In making the bed do not use rank stable manure, as the least excess in bottom-heat causes a spindly growth and invariably ends in failure. Use all leaves, tread firmly, and allow about 6 inches of light open soil for a rooting medium. Sow French Breakfast and Wood's Frame, or other favourite early sorts, thinning out very freely as soon as practicable, as coddling, even for a few days, ruins Radishes at this period. Growers about London sow now and cover the beds with litter, but this means a great amount of labour, the latter having to be removed each morning when the weather is fine and replaced at even-tide. Of course, success or otherwise largely depends on the season, as in very sharp or snowy winters the crop cannot be satisfactory.

J. C.

FRUITS OUTDOOR.

THE ORCHARD.—Pruning in the orchard consists mostly in thinning out branches and spray growths, as alluded to in my recent notes on the treatment of bush and trained trees, but even here it does not do to treat all varieties alike, as Apples vary in their methods of bearing. Some few, such as Blenheim Orange, Lady Sudeley, Margil, and a few others which do not occur to me at the moment, but which may be discerned on the spot by the observant grower, carry many of their flower-buds on the extremities of rather long spray growths, the cutting away of which in the trim way in which we can treat other sorts would interfere greatly with their cropping capacities; consequently these must be left in a rather rougher condition, more especially while they are young. Closer spurs come with age even to such varieties, and then the knife can be used more freely. Orchard trees are often planted far too thickly, or, rather, left unthinned too long, and one often meets with instances in which such strong growers as Blenheim Orange, Wellington, Warner's King, Cox's Pomona, Reinette du Canada, &c., are only allowed the same amount of room that King of the Pippins, Cox's Orange, Manks Codlin, and Fearn's Pippin are given. The remedy for this state of things is the drastic one of cutting out of the way of the strong growers anything which interferes with their natural spread and doing this before they come to meet, as they will never become handsome or fertile trees if they are curtailed in any way by cutting them back to prevent their spreading, and thus keeping two or more trees on the space that one should occupy. One good big tree of Blenheim Orange, for instance, is worth at least four smaller ones that have been kept cut back from want of room. It may not be necessary to cut the surplus trees out altogether right away, but the point I wish to make is that the best placed and most thrifty trees should be selected to become the permanent occupants of the ground, leaving them untouched as to spread of branches, and the others should be cut back hard enough to give all the room wanted by these permanent trees and ultimately removed altogether. Were I about to plant an orchard I would be guided as to distances by the sizes reached by good specimens of the varieties chosen in the neighbourhood, commencing on the

north side with the vigorous sorts and working southwards, lessening the distances according to the closeness of the natural habit, but always allowing plenty of room for a full-sized tree. After having filled the permanent sites, one could then fill up between with some of the short-lived, early-cropping varieties that would pay for planting and for their room before the time came for their removal. Good varieties for this filling-up would be Lord Suffield, Stirling Castle, Early Julien, Manks Codlin, and King of the Pippins, or the under-crop might be from bush fruits, which would do well and pay well for years without becoming a nuisance. An orchard planted on these lines would require but very little pruning beyond branch-thinning at any time, and one would have the satisfaction of knowing that the permanent trees could not become too crowded at any time. Some years ago I took charge of an orchard in which the grouping system had been carried out, and though this system is the best when the spacing is intelligently applied, I found that all the varieties were planted at 12 feet apart, and one part of the orchard contained nothing but Blenheims; consequently before these reached fruiting size half of them had to be cut away piecemeal to allow room for the others. Had they been planted alternately with varieties coming quickly into bearing, all would have paid for themselves in their turn, but, as it was, those which had to be sacrificed only gave trouble all through and never bore a bushel of fruit, while wasting room and labour.

CLEANSING.—After having finished thinning, cleansing the trees should be the next important thing. If they have been much pestered with insects, the best application that can be given will be the caustic soda and potash solution so universally recommended. This is fatal to insect life and frees the bark from all mossy growth as well, leaving it bright and clean. Of course, for the insects the application should be thorough, and the solution is best applied through a sprayer or a garden engine, for a syringe slips about in one's hand and cannot be used comfortably. If mossy growth alone is the only trouble, then I prefer dusting the trees with freshly slaked lime, applying this on a foggy day, when it will stick to the branches. As a cleanser, lime is no more effective than the solution alluded to above, but I prefer it from its manual value, as I never yet found an orchard or a fruit plot of any kind that would not be the better for a dressing of lime on the surface, so that one need not mind a little waste in applying it, as that which falls to the ground will do good in other ways. When the trunks and branches of the trees have been dealt with, attention should next be turned to the roots—that is to say, all trees on grass should have at least all the coarse grasses and weeds, such as Nettles, Sheep Parsley, &c., forked out and destroyed. The finer grasses may be left, as they will not do so much harm, but where labour is sufficiently plentiful, it would be best to keep a clear surface round the trees as far as the branches spread. This is often done with young trees and neglected afterwards, but quite old trees would pay for it, especially those which show signs of loss of vigour, as a clean surface slightly broken up with a fork to let in moisture will reinvigorate them and help to keep them going for years longer than they otherwise would.

GREASE BANDING.—Bandages put on and smeared with cart grease, as recommended some weeks back, should be gone over again, giving a fresh application to the bands, as the grease gets hard and loses its efficacy after exposure to the weather. Neglect of these later applications has caused some to doubt the virtues of banding, as their trees have still been infected, but the insects remain active till quite late in the year and do not all seek their winter quarters till the weather becomes really wintry.

LABELLING, &c.—One of the interesting things in gardening is the knowing what one has and where it is, and those who have not some system by which they can tell this, lose much of the pleasure they might get. Labelling is the most

common way of dealing with the matter, but except in the case of wall trees, where the labels can be nailed to the walls and not fixed to the trees themselves, it has very many disadvantages which need hardly be specified here. The most durable labels for wall trees I know are strips of lead with the names stamped on them. But better far than any labels is a system I have applied now for many years to fruit trees under my charge; this is to have a rough plan of the plots on which each tree station is under number. A key to the plan is kept in which the names as well as the numbers are entered, and also any particulars of changes, space being left for such particulars as dates, &c. If one cuts out or heads down and regrafts a tree, this may be specified in a few words and the names of the substitutes entered; indeed, anything which takes place in connection with the trees may be set down where one has it at one's finger-ends whenever it is necessary to refer for facts. I have found this a great help, and commend the system to all as one far safer than that of labelling. It may take some years to fill out correctly, but the necessary researches and the pleasure of clearing up doubtful points more than compensate for the little trouble entailed.

CORNUBIAN.

STOVE AND GREENHOUSE.

CARNATIONS IN WINTER.

DURING the next two or three months Carnations may be said to be at rest—that is, the hardier or border kinds. The layers have rooted well where propagating was done in July and August, and the young plants are mostly in their permanent quarters for next year's flowering. Autumn planting has great advantages, inasmuch as one may get the young stock established before hard weather sets in, and at the first burst of spring new growth goes on without a check. If planting has been delayed, I prefer to do it now rather than wait until March, provided the ground is not in a soddened state. Yellow-ground Picotees appear too tender to go through severe weather unscathed, and I prefer to pot this class and give them the shelter of glass until the spring. With Carnations outside it is important that they shall be kept free of weeds. Frost, too, damages them only in one way, it is apt to lift the plants out of the earth when a thaw takes place. It is advisable therefore to see that each one is trod in firmly. One should look over the stock occasionally for maggot. Its whereabouts are indicated by white lines in the leaves, generally in the centre of the plant. Such leaves come away from the plant readily and the enemy may be lower. I use a long needle to probe into the heart of the stem, not resting until the maggot is caught. It is a light yellow coloured insect, with a very hard skin, but one that beginners in the cultivation of the Carnation must become acquainted with and spend the necessary time to catch. Except this there are indeed few troubles with outdoor plants in a soil that does not become over-wet.

With plants in pots a great deal more care is required. What one has to guard against is dampness. If in frames, therefore, where the bottom must necessarily be moist, the lights should be taken off whenever the weather is favourable. In such structures the plants will scarcely require water for weeks together, the roots doing best when on the dry side. Cool, span-roofed houses are preferred to frames for wintering Carnations in pots. They are here more under one's observation, and can be easily treated. Water is needed more frequently, but the atmosphere may be kept dry, by always having plenty of ventilation. Except to keep out dense fogs I never quite close the houses. Green-fly is sometimes troublesome. This is removed by the aid of a soft brush or by fumigating with the usual tobacco preparations. Carnations are easily managed plants if such simple rules are followed as above stated, yet there are few plants more readily spoiled by bad treatment. Undue

moisture and a close atmosphere will bring spot in the leaves. It is not a deadly disease, perhaps, but it disfigures the plants and may require the entire removal of much of the growth. This, of course, is a check. An over-supply of water will cause the roots to decay, these being hair-like and tender. It is well to be prepared with soil long before the time for potting. I do not, however, set so much value on the advice that the same shall be mixed as I do on the wisdom of getting it under cover. Loam of good quality and leaf-mould, besides rotted manure may be obtained now, as potting into the flowering size will be started at the end of February. I find it necessary, in the case of a few kinds which are difficult to root, to place them in a slightly heated house. Here there is no danger in sprinkling the leaves daily to make up for the loss in evaporation. This watering should be done in the morning. So soon as the plants become established remove them to cooler quarters. H. S.

Isoloma Vicomte A. de la Combe.—This is one of the best varieties for winter-flowering. It may be propagated from cuttings, and these put in in the spring make nice plants for flowering the following autumn and winter. Grown in an intermediate house it makes a dwarf, compact plant, the thick, woolly, ovate leaves have a red shade on the margins, the flowers are bright red, with a yellow throat, spotted with a darker shade of red. Many of this class of gesneraceous plants would be much appreciated if grown under cool treatment. They all like a rich, open compost, and after the pots are filled with roots, liquid or artificial manures may be used freely. Some of the finest Gloxinias I ever saw were planted out on an old hotbed and had no artificial heat whatever.—A. H.

Daphne indica.—This makes a very pretty little shrub for growing in cool houses, and its charming blossoms are freely produced when the plants are healthy. But owing to the somewhat sluggish root action at this time of year and later on until quite late in the spring the plants are very easily overwatered. Every endeavour should be made in summer when the plants are able to stand moisture to get a strong, yet hard and well-ripened growth into them, but too often they are neglected until just before they are wanted; then, of course, they are not equal to the demand made upon them. Good, strong, vigorous plants will stand being kept on the dry side if it seems to be necessary, but it is the weak, badly rooted bits that turn yellow and lose their leaves when overwatered or dried in the least. The best time to repot is after the flowers are past, and by keeping the roots on the dry side a little and damping the heads freely, nice healthy shoots will be produced. When a fair head of young leaves is produced the plants are safe, and may go outside to a frame or plant protector, the roots a little out of the scorching rays of the sun, but the foliage and stems fully exposed. Like other hard-wooded plants, this *Daphne* and its varieties dislike soils very heavily impregnated with lime, but this need not make cultivators go to the other extreme and use all peat, which is bad for the roots when decayed.

Eucharis amazonica.—Had "E. J." read the whole of the correspondence re this plant he would have seen that it was just the market method of forcing it into flower time after time that I deprecated. Just as much I dislike the method of having the *Eucharis* in flower the greater part of the year. When the plants bloom naturally and well once a year they have done as much as need reasonably be expected if the plant is grown simply for its true beauty and worth. The system of running private gardens as cut-flower factories takes away a lot of the pleasure of those who own and those who look after them, and when, as in the case of the *Eucharis*, a lovely plant is sacrificed to the demand for cut flowers, I maintain that it is a distinct loss. Their true form is never seen in market gardens or in private places where the

forcing conditions prevail. There is as much difference as there is in a Lily of the Valley forced into flower in November and the same gathered from outside in May. One is a beautiful vigorous plant with stout, glossy leaves, the other pale, weak, and debilitated-looking. This was my point in the original note: the answer to a correspondent is all that "E. J." seems to have read. Market methods need only be brought into private places where large demands exist, and then I have nothing to say against them.—H. R.

SOLOMON'S SEAL FOR FORCING.

Of all hardy plants this is, I consider, the easiest to force into flower of them all. It responds very quickly indeed if forced in a brisk heat, which, however, has certain drawbacks, inasmuch as the stems then become unduly long. If grown simply for cutting this is not of any great moment, but if wanted for arranging with other plants they should be forced rather more slowly. The resulting plants are then not only more dwarf and sturdy, but the flowers open more slowly, last longer, and give off a very delicate perfume. The latter, which much resembles that of the Hawthorn, is much appreciated by many people, and a few potsful of plants placed in a house quite scent the air with their fragrance. That the Solomon's Seal is of greatest service from Christmas and onwards need hardly be pointed out, but to keep up such a supply means that a considerable number of crowns must either be grown or bought in. It is as easily grown as forced, is not at all fastidious as to the class of soil it is grown in, nor very particular as to position. A piece of ground or a border about 9 feet wide and 40 feet long would furnish a fine lot of crowns, and if the border is divided into three equal portions, there would always be one lot ready for lifting each year for forcing. The roots after being forced should be saved and planted again in the same or another piece of ground, when at the end of two years they would again be available. It is a good plan to dig in some manure before planting, as the rhizomes form such a host of hungry feeding roots, they soon impoverish the soil if this is not done. A position facing south is the best for growing Solomon's Seal for forcing, as the crowns then ripen up early, but if such is not available, a south-easterly or westerly aspect would do. Forcing is a very simple matter. After lifting and potting up the roots they may at once be introduced into heat. If wanted to flower quickly, a brisk bottom and top-heat is needed, otherwise the gentle heat of a bed of leaves, such as is oft-times made up in a forcing house, will suffice. The pots should be plunged rather deeply in the leaves so that the crowns also are covered with them, which keeps them uniformly moist and greatly facilitates their starting into growth. After they have made from 5 inches to 6 inches of growth, gradually inure them to the light and place near the glass to prevent growth from becoming spindly. When the flowers begin to develop and open, and if not required for immediate use, remove the plants to a cooler place. As the season advances, less warmth is required; in fact, the heat of a vinery or a Peach house then suffices. A. W.

NOTES AND QUESTIONS.—STOVE.

Carnation Mrs. L. de Rothschild.—Through the kindness of a friend, who gave me a few cuttings of this variety of Carnation, I have been enabled to grow a nice lot of plants which are now flowering very freely. Its beautiful salmon-pink flowers are much appreciated here, and the stock will therefore in due course be further increased. It is such a free bloomer, and a good grower withal, that it appears to be one of the most easily cultivated of all the winter-flowering Carnations. Those having to supply Carnations in quantity at the present season should grow a good number of plants of this variety, which will not, if well grown, fail to give satisfaction.—A. W.

TREES AND SHRUBS.

ABIES GROWING AT OCHTERTYRE, NEAR CRIEFF.

Abies amabilis.—A tree planted in 1889 is now a fine plant. A number of smaller ones planted since are equally fine. It is a very desirable variety to plant as single specimens.

A. balsamea.—Growth vigorous, and never affected here by frost. It is said to be tender in some places. The specimen here is about 15 feet in height.

A. brachyphylla.—Hardy, and one of the best. The plant here has not done so well lately, but I attribute this to its having too much surface water during wet weather.

A. bracteata.—This variety has not been quite a success here. Some of the smaller plants look as if they would make more satisfactory growth.

A. cephalonica.—This is handsome till it reaches upwards of 30 feet high, when the leaders give way and the side branches grow vigorously. The plant put out in 1855 cones very freely here.

A. cilicica (true).—This is yet small, but is growing freely.

A. concolor.—As an ornamental variety this is an acquisition and grows rapidly here.

A. firma.—This plant is very healthy. It is late in starting into growth. The plant here is 9 feet high.

A. concolor violacea.—The plant here 5 feet high is growing vigorously. It is a more desirable variety than *concolor* for ornamental planting.

A. Fraseri will not grow here, although it has been tried several times.

A. grandis.—There are two large specimens here each 60 feet high and quite distinct; one has a softer green foliage and does not bear cones, while the other has shorter leaves and a more rigid form of growth, coning annually. Unfortunately, the cones are produced very near the top.

A. lasiocarpa (Hooker).—There are several plants of this the true variety, but are all more or less of an unsatisfactory nature here, only one plant having grown freely.

A. Lowiana.—This grows very freely. There are no large specimens; a few about 12 feet high.

A. homolepis.—A most distinct variety and altogether different from *A. brachyphylla*, which some growers consider synonymous. The largest plant is nearly 20 feet high and grows freely.

A. magnifica.—A beautiful variety, growing very rapidly. The largest plant is 25 feet high, but has not yet borne any cones.

A. nobilis grows rapidly and forms beautiful specimens. The largest plant, over 70 feet high, was blown down six years ago. From this I had raised hundreds of seedlings.

A. nobilis glauca.—None of the plants here are so distinct as I have seen in other collections, yet they are of a constant character and equally robust.

A. Nordmanniana.—There is a large number of this, and all growing into beautiful specimens, and still free from aphids.

A. numidica.—This has failed to grow here.

A. pectinata does well as a forest tree. A number of fine trees were cut some years ago.

A. p. fastigiata pyramidalis.—So named by Mr. Dawson, of the Arnold Arboretum, Boston, U.S.A., who pronounced it the finest specimen he had ever seen. It is never found in catalogues. It is possibly the handsomest conifer we possess here; perhaps the most distinct.

A. Pinsapo.—A few are growing very satisfactorily and are fine specimens, but the oldest trees seem to be affected by a sort of canker, a good number of dead branches having annually to be cut out.

A. Pinsapo glauca.—There are two beautiful small trees, each 8 feet high. For grafted plants they are highly satisfactory.

A. sachalinensis.—This, planted in 1889, is now 10 feet high. Apparently it is unsuitable for this locality.

A. sibirica.—This grows very badly, yet very healthy. It is not a desirable variety, except for a collection.

A. Veitchi.—Grand in form and growth, and when more plentiful and better known it will no doubt be freely planted.

A. Webbiana.—This is one of the most distinct and beautiful of conifers, but it has several times been very much cut by late spring frosts.

A. Webbiana Pindrow.—This grows equally as freely here as Webbiana, but is liable to suffer similarly from spring frost. It is not such an similarly from spring frost.—GEORGE CROUCHER, *The Gardens, Ochertyre, Crief, N.B.*

A note from Dublin.—Mr. Moore, writing from Dublin on November 9, says:—

It has been a fine season in Ireland, one of the best I ever remember, and the brilliant colours of the foliage of many plants and trees even now make a handsome ending to the season. *Rhus Cotinus*, *Rhus cotinoides*, and *Berberis Thunbergi* were the three brightest in colour, but there were dozens of other trees and shrubs that were very lovely. *Pyrus nigra*, *P. arbutifolia*, *Euonymus alatus*, *E. europæus*, *Spiræa prunifolia*, *Enkianthus japonicus*, and the hardy *Azaleas* have all been brilliant.

SHRUBS IN BLOOM IN SOUTH DEVON.

ABUTILON VEXILLARIUM has borne its crimson and yellow pendent blooms, and bids fair to continue its somewhat diminished display, should severe weather not intervene, until the new year. *Ceanothus Gloire de Versailles* has been bearing a few of its pale blue bloom-clusters, and the leafless *Winter Sweet* (*Chimonanthus fragrans*) has already opened the first of its scented stars. The Mexican *Orange Flower* (*Choisya ternata*) is in some gardens blossoming freely, as is *Cytisus racemosus*, while *Colletia cruciata* has its spiny growths thickly covered with minute white blossoms. The *Habrothamnus* still shows a drooping cluster of crimson tubular blooms, and the double *Jew's Mallow* (*Kerria japonica* fl.-pl.) is bearing against a cottage wall its orange-hued blossoms. The *Laurustinus* is slowly coming into flower, and the great standard *Magnolia grandiflora* produced a few ivory-white scented chalice until mid-November. The shrubby *Veronicas* are blossoming freely, and here and there *Yucca gloriosa* rears a stately flower-spike. Of climbing plants, *Jasminum nudiflorum* has been one of the most effective, having spread a sheet of gold over cliff-face, trellis and wall, while it creates a particularly harmonious picture where it is associated with *Cotoneaster microphylla*, whose crimson berries are now at their brightest. A cottage in the neighbourhood of Plymouth, covered from ground to eaves with the *Cotoneaster*, through which the shoots of the *Winter Jasmine* twined, presented a pretty and unique appearance in mid-November clad in its winter mantle of crimson and gold. With everyone planting climbers for spring and summer effect, or, as in the case of the *Virginian Creepers*, for their autumnal colouring, the man who is content to forego the charms of profuse blossoming and fragrance during the heyday of the year in order that his walls may assume their fullest beauty as *Christmastide* draws near, when the charms of

the earlier flowerers shall have vanished, is a public benefactor, and should merit the esteem of all who love a spot of bright colour in the dark December days. *Convolvulus Cneorum* has borne some expanded blooms, and the oval orange fruits of the *Passion Flower* illuminate the dark foliage with their bright festoons. The *Lapageria*, both the red and the white variety, has been blooming well on a north wall in the open during the whole month, its trails of pendent, waxy blossoms being thrown into high relief by the dark background of stone and foliage. *Solanum jasminoides* is still in profuse flower; indeed it is difficult as yet to mark any decided decrease in the number and size of the bloom-clusters that reached the zenith of their beauty and luxuriance towards the close of August and commencement of September. During the following month a marked change will doubtless be seen, but in

THE ARTISTIC PLANTING OF TREES.

ONE of the most false and stupid assertions ever made is that garden design is possible without garden knowledge. It is so wrong that it could only have been made by one who had never faced the realities of the subject and its extent. Many people are so glad to be in a garden of any kind, out of the rush and noise of our towns, that almost any triviality passes for garden design, and conventional things are accepted as pretty without regard to what would be right in the place. We may see the *Wellingtonia* planted within a few feet of a window, and trees planted in



Hydrangeas at Menabilly.

mild winters a good sprinkling of flower-clusters is carried into the new year, and in the present year it was not absolutely flowerless until the second week of February. One of the prettiest sights of the month is *Clematis Vitalba*, the *Traveller's Joy*, which, growing in graceful freedom in hedgerow, wood and shrubbery, garlands tall evergreens with feathery skeins now silver-grey in colour, hangs in tangled loops from the lofty branches of the giant *Ash*, or veils the straggling hedge-top in a billowy cloud of softest grey. S. W. F.

NOTES & QUESTIONS.—TREES & SHRUBS.

Vitis inconstans in fruit.—This handsome climber is at the present time making a fine display of its beautifully coloured little Grape-like bunches of berries, of a lovely blue colour, that were so hidden by lovely crimson foliage as to be quite overlooked until the foliage dropped. The hot, dry summer gave a very intense colour to the foliage, and is probably responsible for such highly-coloured berries, for I never remember seeing them so plentiful before.—J. Groom, *Gosport*.

conditions in which it is impossible for them to grow to any good effect; and when we consider the hundreds of kinds of trees that have to be planted, it is no wonder that men, busy in other ways, should make many mistakes in planting. But when we come to deal with garden design on the part of professional men, so low a standard should not be accepted; and a high one is unattainable without a knowledge of the garden art itself, and especially of the loveliest gift of Nature to the earth—its trees.

Of all the different questions which the landscape gardener has to deal with, trees are the most important. A knowledge of them is an absolute need, as they grow in gardens, pleasure grounds, parks, and woods; not only the ordinary "wood" of the country seat, but also in real old woods of the coun-

try, like those in Sussex and many other parts where long-established native woods exist. This knowledge is not only essential for good planting, but also from an artistic point of view. How a tree grows in a park or pleasure ground is often different from the way in which it is massed in woods; and it is as important for the landscape planter to know one expression of its beauty as the other. Take the Oak—how mistaken anyone might be as to its planting who knew only one expression of its beauty! The Oaks in Sussex are quite distinct in aspect from those of Warwickshire—trees by the roadsides and in the parks. Yet the Oak, set close in a Sussex wood, with many silvery columns rising out of underwood, or Primroses, is as beautiful as anything in Warwickshire. Then, again, we have the shattered old Oaks of Sherwood, and the stately Oaks which sow themselves on the banks of many rivers, which are as handsome as any in a park, and interesting as having placed themselves. And these are but a few examples of the variation of form of one tree, showing the need for the study of trees in Nature, and not in books.

From so much variety of form occurring in one tree, we may judge how much the many trees of the northern and temperate regions of Europe, Asia, and America may influence the beauty of a landscape, and how much they have to learn who would deal with them rightly. The art of planting trees with good effect is a far higher question than that of the mere divisions and plans of the ground round a house. The Birch is beautiful in many forms, but I never had a true idea of the beauty of a Birch wood until I saw woods in Northern Germany, with nothing visible but silver stems. Trees vary with every condition of altitude, soil, and climate; and there is no way of knowing them but by actual study in many different places, not only for their cultivation, but for their beauty.

The better we know the aspects of trees in Nature, the more easy it is to do right work in park or pleasure ground. Take the common pinetum as seen in many country places. Its effect is rarely good, owing to the way in which the trees are dotted about. An acquaintance with the Pine woods of the northern world should save us from that weak way of planting, each tree labelled and set out by itself as a specimen. A much better way would be to mass and group trees that we know to be hardy. Worse still is it when, instead of keeping these Pines in the pinetum, they are scattered about the foreground of the house. Some of the most beautiful houses and home landscapes in England are marred by this practice of scattering trees in the foreground, very like those in front of a child's Noah's ark. Artists and those who look much at form see the error at once. The artist cannot tolerate what the gardener may think perfection; and the artist is right. The shape of the conical conifer, always ugly as compared with the trees of our own country, is only natural to them when young.

If we travel in countries where these Pines abound, we find that they grow rather closely together, or, if not, that the extinguisher is by no means their true form, and that they shoot up into handsome and finely-coloured stems, sometimes over 100 feet high without a branch; so that Nature and art show us that the crinoline shape is wrong, dear as it may be to the ordinary planter.

Many country houses are marred by this way of planting, and the evil is increased through the laying-out of grounds by people whose main idea of tree form is that of "fixed points," to be always clipped—the most inartistic idea that could be conceived by man. It is a delusion to suppose that there is anything Old English in this common mode of planting conifers. The Irish Yew is a mere sport quite of modern origin, and most of these ill-shaped or ugly conifers that we see stuck about grounds are of recent introduction. The view from the house to the park, and from the best parts of the park to the house, is often marred by this error, which no man knowing the natural grouping of trees would commit. The forms of the fine English trees in our parks are as good as those of any trees on earth, and should not be obscured by stupid planting. All exotic conifers should be grown in woods or groups, where they will not interfere with the good effect of trees finer and more precious to us than they can ever be.

Look at the stiff clumps of trees in iron rings which disfigure nine out of ten of our country seats. A more inartistic way of planting could not be devised; and if our plantings were made by people with the least idea of the beauty of trees in Nature, we should never see such clumps, but trees massed in natural groups or colonies, easier to manage in every way, and in which they would really shelter and help each other. Plantations might often be formed best in pieces of ground difficult to cultivate, or soil that is useless save for trees. The thin "skippy" belts of trees which we see everywhere, and which are always useless for game protection or effect, would never be thought of by anybody who has studied trees in Nature. The best planter might be forced to make such a belt for a shelter in exposed ground; but generally it is much better to use inferior land, or land difficult of approach, or too much exposed or too poor for arable crops, but which, when planted as a wood, would some day give us at once good effect and timber.

The best effect and good cultivation may go together, and the knowledge we may gain in a wood will often help us well. Take the common Spruce, a tree which does not usually do well in the south of England, which starves on the hills and is diseased in the heaths of Surrey, or the cool forest hills of Sussex, yet we see it planted everywhere, and even sometimes made into hedges and clipped by those who probably think one tree is about as good as another for clipping or any other use.

Even in our own limited tree flora of Great Britain a good deal depends upon the soil in which we put a tree, and we have not to deal with the tree flora of Britain only, but with that also of Europe, Northern Asia, and America. Trees of the Pine tribe have been so extensively introduced that many of them may have to be dealt with in quantity by the landscape gardener, and for planting them aright no book knowledge is a substitute for the actual knowledge of the tree, both in the wild and cultivated state if possible. W. R.

NOVEMBER IN SOUTH DEVON.

MILD as have been the Novembers of the two preceding years, the past month has attained an even higher average temperature, and the foliage of such Dahlias as were not injured by the early October frost has remained green throughout the entire month, while in sheltered spots plants of Heliotrope are as yet unscathed. Towards the commencement of the month a couple of short-lived gales denuded the trees of much of their glowing leafage, but even in the concluding days of November the autumnal tints had lost but little of their decorative value. In the hedges the leaves of the Brambles are here purple, here blotched with crimson, while now and again the berried skein of the Bryony gleams—a spot of vivid scarlet. The berries of the wild Guelder Rose were still in evidence at the commencement of the month, when the coral-pink of the Spindle Tree was here and there to be seen, and in the garden the Strawberry Tree (*Benthamia fragifera*) was thickly set with its crimson fruits. The Hollies are exceptionally bright, being loaded with berries. The birds have already commenced to attack the haws, and the thrushes congregate by dozens round the fruiting Ivy that garlands many an old tree-trunk. The rooks are busy with the acorns of the Ilexes, and each morning may be watched from the windows hovering over a tree not 30 yards distant and tearing off the acorns. Early in November a few swallows were still to be seen. The last fortnight of the month was a period of most perfect weather, a time of gentle breezes and sunny hours, very similar to the delightful "St. Martin's summer" that we experienced during the preceding month. Some people, by the way, confound "St. Martin's summer" with the "Indian summer," but the latter is much later, coming when the trees are leafless, and in Canada generally follows closely upon the "Squaw's winter," a period of heavy snowfall, which, however, does not freeze, but rapidly disappears, and is often succeeded by a spell of placid, halcyon days, to which the name of "Indian summer" has been given.

In the garden the Sweet Alyssum clothing the high bank, though not the unbroken expanse of flower that it has been through the two preceding months, is still in bloom. The first of the Poppy Anemones has already opened its petals, those being of a rich violet hue, but unopened buds hard by show that ere long scarlet and white will soon be added to the soft purple. Aster grandiflorus has been especially decorative this year, the early October frost, which was exceedingly partial, not having harmed it, and during the early part of the month its large purple, golden-centred star flowers thickly set on their rigid bloom-sprays have created a telling effect in the garden. The Valerian (*Centranthus ruber*) is here and there in bloom on the rock ledges, showing spots of pink, white, and red against the mantling Ivy. The giant Christmas Rose (*Helleborus altifolius*) has been in profuse bloom since the commencement of the month, its snowy chalice, sometimes as much as 4 inches across, being often held on spotted footstalks considerably over a foot in height. *Coreopsis grandiflora* was still bearing a fair quantity of golden

blooms at the commencement of the month, and *Cosmos bipinnatus* has produced its single blossoms above the elegantly cut leafage, though in lessened numbers, up to the close of the month. Scapes of some of the *Crinum*s are yet to be seen in certain gardens, and the autumnal-blooming *Crocuses* have begun to create a bright display. The *Cactus Dahlias* were at the commencement of November still bearing a sparse show of glowing blossoms, and here and there an occasional pale blue *Delphinium* spire or a scattering of large golden stars of *Doronicum plantagineum excelsum* Harpur-Crewe was to be seen. *Erigeron speciosus* bore a few of its yellow-centred mauve stars into the early days of the month, and the Mexican Daisy (*Erigeron mucronatus*) after a blossoming period of six months was still in bloom in dry, sheltered positions.

Hardy Fuchsias held their flowers, though in gradually lessening numbers, up to the conclusion of the month, and *Gaillardias* and *Gazanias* retained their bright blossoms in many a garden, while not a few deep blue flowers of *Gentiana acaulis* were to be met with, and the *Helichrys* gave spots of colour here and there. A few of the perennial *Sunflowers* retained their golden blossoms until the opening days of November, and the great *Hydrangea* bushes, the tint of whose gradually paling flower-heads became less effective as the weeks wore on, were still not without a certain decorative value. *Hypericum Moserianum* has borne its yellow blossoms, and the delicious Algerian Iris (*I. stylosa*) as well as its white variety, that commenced to flower before the close of October, is now coming into fuller bloom, and will continue to blossom uninterruptedly, should a mild winter be experienced, for another five months. No more lovely or fragrant flower than this Iris is available through the dark winter days, while the blossoms last well in water if they are cut before the buds expand. In light, porous soil in the south-west the plant increases at a prodigious rate, some gardens where it was unknown five years ago, and into which a few tubers were introduced, now containing large patches of this valuable Iris. The *Kniphofias* still show an occasional fiery spear-head of blossom, and the *Marigolds* brighten the cottage gardens with their orange, saffron, and pale sulphur, while the *Paris Daisies* are not flowerless, and *Physalis Alkekengi* and *P. Franchetti* display the globes of their orange-scarlet calyces, some of those of the latter variety being of immense size in comparison with those

of the earlier introduction. *Scabiosa canescica* has produced a few of its porcelain-blue flowers during the early days of November, and the *Winter Flag* (*Schizostylis coccinea*) has created a brilliant effect where planted in large clumps. This plant, like the Algerian Iris, succeeds best in a porous compost. *Sparmannia africana* has been in flower in a sheltered nook, and the *Winter Daffodil* (*Sternbergia lutea*) has borne its golden, *Crocus*-like blossoms. *Stokesia cyanea* produced its purple flowers well into the month, and the *Periwinkles* have also been blooming. Of these, the double variety of *Vinca minor* is particularly charming, the blossom to a casual observer having much the appearance of a *Marie Louise Violet*. The white variety of this *Periwinkle* is also a chaste and pretty flower, and the pale lavender-blue *V. acutiloba* presents a fair picture when covered with a profusion of its delicately tinted blossoms. *Zauschneria californica* was still bearing its vermillion blossoms at the commencement of the month, the same colour being afforded by

the flowers of great bushes of *Salvia splendens* that have remained in the open undisturbed for some years, and which bloomed throughout the entire month. S. W. F.

FLOWER GARDEN.

IRIS SOFARANA.

Of the fascinating group of *Cushion Irises* about a dozen species are now in cultivation, a large number of which have come from Syria and the Holy Land. The subject of this note and of the accompanying illustration is also an inhabitant of these countries. Its discovery dates from the spring, 1898, when a collector of the firm Van Tubergen, of Haarlem, found it growing in the Lebanon at an altitude of 4500 feet to 5000 feet, near the highest part of the railway to Damascus, in the neighbourhood



Iris sofarana, two-thirds natural size. From a photograph sent by C. G. van Tubergen, Jun.

of the village Ain Sofar. Dried specimens sent home gave the impression of its being a very dark-coloured variety of *Iris Lorteti*, the collector being in fact sent out with the special commission to secure among other things a good supply of this handsome plant. During the month of May the collected rhizomes came into flower in Messrs. Van Tubergen's nursery, and on its proving to be an absolutely different plant from *I. Lorteti*, specimens were forwarded to Professor Foster, who proposed for it the specific name of *Iris sofarana*. The rhizome of this new Iris is short and stout and the leaves remarkably broad, so much so as to resemble an ordinary bearded Iris. When in a young state they are of a pale green. The scape reaches about a foot in height, bearing a large flower of noble proportions and outline of the sombre, subdued greyish combination of colours which this remarkable class of *Irids* usually has in its

flowers. Of the standards, the ground colour is a creamy white with innumerable thin purple veins, and dotted all over with the same colour. The falls, which are very large, are of the same ground colour, but here the markings are much bolder, and they fuse together in the centre into a nearly black, large central blotch. A few long black-purple hairs are scattered over the central portion of the fall and over the inner portions of the flower. Altogether it is a very welcome addition to this fascinating group and well worthy of cultivation.

Although, unhappily, it cannot be said that we have already successfully solved the highly interesting problem of growing these *Irises* to perfection, yet their cultivation cannot be too strongly recommended to the many whose gardening ambition cannot be satisfied with the ordinary run of garden flowers.

Haarlem, Holland.

JOHN HOOG.

***Tropæolum tuberosum*.**—To those who may intend trying this very handsome climber, my experience of it as grown for many years in Suffolk may be useful. The soil of the garden was sandy and light, and I found that a sunny position did not suit the plant at all, but it grew admirably on an east wall and where it seldom got a glimpse of sun, as there was a grove of tall Beech trees within 50 yards on the eastern side and a fine old Cedar close by on the south. A length of about 20 yards of wall was covered thickly to a height of 16 feet, and for months, quite up to the end of autumn, the plants were clothed almost from the ground with innumerable red and yellow flowers. I was much interested in Mr. Day's account of its behaviour at Galloway, as the capital results I had with the plants mentioned above led me some years ago to recommend it to him, and I believe I am right in saying that I sent him the tubers from which his present stock originated. The method of treatment which I gave the plants was similar to that recommended by Mr. Day, except that in my case it was not necessary to add sand to the soil when planting, but I quite think sand would be most useful in soil of a heavier nature. For training on walls I found no plan so satisfactory as straining thin string from the top of the wall to pegs pushed into the ground near the tubers. The twining shoots would climb up these strings very quickly, and I was careful to have strings enough to prevent much entanglement of growth till the top of the wall was reached. The increase of tubers was great every year, but I never tested them for their edible properties.—J. C. TALLACK.

Tropical Water Lilies in the open air.—Under this head "F. W. B." asks if the *Victoria regia* has ever bloomed in the open air in England, and cites a reference bearing on this subject and the practicability of a repetition where there is clean warm water from a factory, &c. If any reader contemplates the culture of the *Victoria regia* in the open air I would strongly urge him to use the variety *Trickeri*, as it succeeds in a temperature 10° cooler than *V. regia*. At Benning, D.C., U.S.A., V. *Trickeri* came up spontaneously in a pond where the plant had been grown the previous year, the seed having been in the pond during the winter when the thermometer registered 17° below zero. These seedlings made their appearance on the surface in June, and although the past summer was not what is regarded as hot, but rather the reverse, the plants made good growth, and on August 24 produced the first flower, and continued at intervals until October. The largest leaf measured 4 feet in diameter, not counting the turned-up rim. At Riverton, N.J., more than 100 miles north of Washington, numbers of *Victoria* plants came up under like conditions, and several of them flowered in September and early in October. These plants were not subjected to any artificial heat whatever. Where plants had been raised indoors and planted outdoors on

June 1 without artificial heat, they produced flowers in July. The leaves of the same plants attained a size of 5 feet 6 inches in diameter, and the turned-up rim 7 inches. Under the same conditions *V. regia* has not shown signs of a seed germinating, and a plant raised indoors and transferred to summer quarters under like conditions has in some cases proved a failure and others have done fairly well, but in no case could comparison be made. While such conditions do not exist in England, yet it is possible to heat an artificial pond outdoors either by exhaust steam or hot-water pipes to a temperature of 75° to 85° at no great expense during June, July, and August, or later.—W. TRICKER, *Riverton, N.J., U.S.A.*

CHRYSANTHEMUMS.

EXHIBITING LARGE BLOOMS IN VASES.

It is satisfactory to find that at almost every Chrysanthemum show worthy of the name at least one class has been devoted to an arrangement of large Chrysanthemum blooms in vases, though of a limited nature in most instances. This, however, appears to be the beginning of the end of staging large blooms on boards, and although for one or two reasons it may be desirable to retain a few classes in which blooms of high quality may still be exhibited in what has hitherto been considered the orthodox method, those who appreciate the large blooms for their decorative value must rejoice that a change has at last set in. In the newer method of exhibiting blooms in vases, the diverse forms and pleasing variety of colour are likely to be represented in such a way that each point attains the prominence it deserves. The curious and quaint forms of many of the handsome Japanese blooms by the older method of exhibiting are rarely seen, although boards for staging Japanese blossoms were enlarged a few years since. By the arrangement in a free and easy manner of, say, half a dozen huge blossoms in a vase the whole of each bloom is seen and the greatest possible effect thereby gained. The great vase class at the National Chrysanthemum Society's show in November last may fairly claim to have been the chief competition of the season. The first prize lot of twelve vases, each containing five blooms, was arranged with exquisite taste, and a fine display they made. The second prize lot was also very fine, but the flowers appeared to lose something by their arrangement. The quality in each case was high. A curious feature of the display was the exceptionally large number of white, pink, and other pale-coloured kinds. It appeared to be a case of selecting varieties developing blooms of exceptional size, and as these are less frequently seen in Japanese blooms of crimson, orange, and other rich shades of colour, the more bulky, but less pretty blossoms were more often seen. If this and similar classes are to be repeated next season, it may be well to consider the advisability of a proper representation of the richer colours as seen in the Chrysanthemum. A display of this kind should be far more interesting than that made up of colours of a washy kind chiefly. Excellent though this display of Japanese Chrysanthemums in vases was, it appeared to lose somewhat by its uniformity. The society was exceedingly fortunate in having loaned to it a very large number of deep olive-green vases, well suited for the purpose, but by confining each exhibitor to the use of these the display lost much. Something more original was wanted to make the display effective; and as

uniformity of the exhibition boards in the past has made Chrysanthemum shows appear somewhat monotonous, those responsible for change in these displays should endeavour to avoid a similar result by not laying down hard-and-fast rules as to the kind of vase to be used. The executive no doubt had a good reason for keeping each exhibitor to the use of vases of one pattern, as by their use they were all placed on an equal footing. Why cannot exhibitors be allowed to bring their own vases? This will probably be answered by some that the cost of acquiring new vases and the expense entailed in getting them to the exhibition are more than they can bear.

The object in drawing attention to the kind of vase used is to induce those responsible for forming schedules of prizes to leave this an open matter. Some persons may say that the character of the vase used would secure too large a share of attention from the judges; in fact, this has already been put forward. That a pleasing diversity in the character of the vase used would enhance the display, and also be the means of seeing the blossoms at their best, is undoubted.

The incurved blossoms are also very effective when arranged in large vases, their stiff and rigid character being less pronounced in this way than when set up on boards. The impetus given to this section during the last two or three years by the acquisition of several large and handsome sorts has also given us greater variety in colour. The large-flowered Anemones and their more fantastic Japanese rivals, with long tasselled florets, make superb exhibits when set up in vases. As at present exhibited their beauty is to a considerable extent lost, and those who have not seen blossoms of these types arranged in vases of medium size have no idea of the beautiful effect they produce. Pompons and Anemone pompons when not too crowded are also charming. The unnatural method of exhibiting three large blooms of these miniature kinds, altogether out of character, on boards is to be deplored. A few dozen sprays in correspondingly small vases would be very convincing as to their value for decoration. The same remarks apply to both the large and small-flowered single varieties.

Within the next few weeks Chrysanthemum growers all over the country will be preparing their prize lists for next season, and a break away from old and somewhat useless methods of exhibiting the Chrysanthemum should be encouraged.

D. B. CRANE.

Good old Chrysanthemums.—I was highly gratified to read in the interesting notes on Chrysanthemums in Waterlow Park the names of several good old varieties which I was afraid were quite extinct. For instance, those three beautiful compact sorts Mrs. G. Rundle, George Glenny and Mrs. Dixon are mentioned, and although many larger flowered sorts adapted for exhibition exist, few if any are prettier or better growers. At one time specimen plants of these sterling sorts were exhibited at the London shows sometimes carrying from 80 to 100 neat heads of blossom. Indeed, if judicious feeding and good all-round culture are given, the individual flowers will reach considerable dimensions, and their colour and symmetry are so good. For ordinary home decoration few can beat them in the incurved section, and whatever the season is, one can rely on an almost total absence of blind or malformed flowers.—C.

Chrysanthemum cuttings.—At this time of year when growers of Chrysanthemums are busy propagating for next year's supply, it may not be out of place to call attention to the great superiority of cuttings that are produced by

plants grown on the planting-out system, as practised by market growers, over those from pot plants grown all the season with the aid of highly concentrated foods and flowered as a rule in artificially heated houses, so as to get them into bloom at a fixed date. Doubtless many of the evils that Chrysanthemums suffer from at the present day are traceable to the unnatural conditions that prevail during the earliest stages of the cutting's existence. The market grower, who goes in for large quantities of one kind, grows his plants as a rule in the open ground and with much more natural surroundings, and when the time comes for lifting and replanting under glass every plant will be found to have quite a colony of underground shoots, which soon make splendid cuttings. I feel sure that if many private gardeners were to plant out any kinds that they have any difficulty in getting good cuttings from under the pot system, they would find it repay the trouble.—J. GROOM, *Gosport.*

Bush Chrysanthemums.—Many of the large show varieties are not suitable for other purposes, and growers who wish to have a few pot plants for decoration may often be puzzled to know what selection to make. During the present season at Messrs. Veitch and Sons' and at Mr. H. J. Jones's I saw some very pretty little bush plants in pots that would be useful either in a conservatory, in a house, or even where flowers for cutting were wanted. Freedom of growth both in foliage and bloom are the chief requisites in such plants. Among these plants were Wm. Tricker, Emperor of China, O. J. Quintus, and Mrs. Wingfield in various shades of pink. Crimsons were well done in J. Shrimpton and Wm. Seward. Bronzes were a little more numerous, there being some good examples of Mme. la Comtesse Foucher de Careil, Charles Davis, and Source d'Or. Of whites, some good plants were shown of Souvenir de Petite Amie, Mme. Carnot, Louise, Mlle. B. Pigny, Lady Selborne, Mabel Williams, White Clinton Chalfont, and White Quintus. Yellows were free and good, the best being October Yellow, Cloth of Gold, Yellow Lady Selborne, Amiral Avellan, W. H. Lincoln, Ryecroft Glory, and Sunbeam. Ryecroft Scarlet is a very bright, effective variety for the purpose, and so, too, is the newer Etoile de Feu. Dr. Sharpe does well, and so do Margot, M. William Holmes, and Nellie Brown, which need no description and are peculiarly adapted for this purpose.—C. H. P.

Calvat's novelties.—Although most of M. Calvat's seedlings have been seen during the present season in good form, and some of the oldest still remain very popular with English growers, yet the 1899 series have not been quite so common as might have been expected. One of the first of this year's novelties to be seen was Mme. Lucie Recoura, a large, broad-petalled Japanese of a dark shade of carmine-amaranth, with silver reverse. Soleil de Décembre was well out by October 20, and is a large Japanese incurving type of flower with broad florets something like Oceana; colour deep canary-yellow. M. H. Martinet is also a Japanese of good build, the colour a rich shade of crimson-red with a bronzy yellow reverse. Mme. A. Rey is one of the most promising of its kind. It is of the Japanese type; colour rosy lilac, reverse silvery. Princesse Bessaraba de Brancovan is a very large white Japanese, close and compact in build. W. Wells, although represented by the raiser as an incurved, was certainly a Japanese when seen here in England for the first time. It has broad florets, and the colour is a rich old gold. Mlle. Jeanne Lieber, rosy white, shaded lilac, is a large flower. Eliane, which already has been misspelt Elaine, is of good size, but the florets are rather thin and sharply pointed. The colour is best described as straw-yellow. All these were fully out by the third week in October, showing, as most of his seedlings do, a tendency to earliness, which the seedlings of many other raisers do not. Chrysanthémiste Lemaire is a large incurving Japanese with pointed florets, the colour a deep velvety crimson-red and reverse of bronzy yellow. Zephoris is a large Japanese, and one of

the most promising in the set. It has flat, pointed florets, and is a very full flower, the colour pure pale golden yellow. Mme. C. Terrier is a pearly rose; Professeur Jacquinot, a hairy Japanese, pale lilac-mauve; Lydia, a Japanese incurved, rosy lilac, reverse silvery pink; Mon Petit Jean, a dark yellow not met with this season, but shown pretty freely in medium form at Lyons.—C. H. P.

SOME NEW CHRYSANTHEMUMS.

THE season being now over and all visits to the trade displays, floral meetings, and exhibitions at an end, I have been looking over notes taken during the season and find that novelties are, perhaps, more numerous than ever. Many of them are so fine that they would have taken a leading place a few years ago, but now-a-days the mere number seems to swamp many a variety that would otherwise come to the front, for, no matter how good they may be, there is not room for all. Among some of the best of the season's novelties are the following, all of the Japanese section:—

Edith Pilkington.—Very long, drooping, medium-sized florets that are curly and twisted; colour pure pale canary, deepening to golden-yellow in the centre.

Miss Alice Byron.—Very fine flower of large size and great substance, globular in form. The florets are very broad and closely and compactly arranged; colour pure white.

J. R. Upton.—An Australian seedling of great merit. The blooms are large and the florets of great length, but medium width, and slightly curling at the tips; colour deep golden-yellow.

Kathleen Rogers.—Large bloom, of incurving form, with broad grooved florets; colour pure white.

M. Louis Rémy.—A pure pale golden yellow sport from Mme. Louis Rémy, one of the numerous sports from Mrs. C. Harman-Payne, similar in size and form to the parent.

Amateur J. Le Chaplais.—Immense spreading blooms; the florets are grooved and of good width and substance; inside colour deep reddish crimson, reverse golden bronze.

Mrs. A. H. Hall.—A fine massive built flower, very large and globular in form, with grooved florets of medium width; colour deep orange-yellow, shaded golden bronze.

Florence Molyneux.—Also a very large flower. Its build is very close and compact. The florets are of good width, twisted and grooved and incurving; colour white.

Mrs. Alfred Tate.—A fine golden chestnut-bronze sport from Etiole de Lyon. The florets are long and flat and the form is almost identical with that of the parent.

Lord Ludlow.—Very large; florets long and drooping and very broad; colour pale lemon-yellow, slightly striped.

Soleil de Decembre.—An early bloomer. It is incurving in form with very broad florets; colour deep golden yellow.

Princesse Bessaraba de Brancovan.—In this the florets are of medium size, being close and compact; colour pure white, slightly tinted green.

Lord Salisbury.—Florets of great length, medium width and curling at the tips, a closely-built flower; colour canary yellow of a very pure shade, dusted carmine.

Miss Elsie Fulton.—Large blooms with broad grooved florets, curling at the tips, a deeply built flower; colour pure waxy white.

Miss Maud Douglas.—Broad florets, good sized flowers, pale rosy amaranth with reverse of silvery pink.

Mme. Von André.—A pale sulphur sport from Mutual Friend, and similar in size and build.

Lily Threlfall.—Deeply built and closely incurving flower with medium-sized florets; colour creamy white.

Eastman Belle.—A very useful early variety of large size. It is a deep crimson and gold sport from President Borel. C. HARMAN-PAYNE.

Exhibiting single Chrysanthemums.—A complaint was recently made that these most charming of all Chrysanthemums when ordinarily staged in boxes and in trebles at shows are presented in a flat, formal way that gives to the blooms an objectionable appearance. The same remark applies to pompons as usually shown, in trebles on boards, although perhaps in a less

degree. Single flowers are necessarily flat, and when thirty-six in trebles are presented on an ordinary dozen show-board, every effort seems to be made by the exhibitor to have every bloom as flat and level as possible. Would it not be much better to have classes for six varieties, six blooms of each, set up in dwarf vases or glasses, with some foliage amongst them? In a very pretty exhibit made at a recent Drill Hall meeting evidence was furnished of the pleasing way in which in such vases pompons could be presented. Singles would no doubt look even more pleasing because they are light, more graceful, and better suited to this form of arrangement. Probably the exhibitor prefers boards and boxes for his flowers, but when the best effects from flowers at a show have to be obtained, the exhibitor must vary his methods to suit more advanced needs.—A. D.

Late Chrysanthemums.—With the approach of Christmas the majority of large-flowering show Chrysanthemums are over, and a considerable gap is left in the conservatory and show houses. The care now bestowed on varieties that are either naturally late in expanding or that can be retarded by late pinching or keeping under canvas in the open air until very late in the autumn, has led to the Chrysanthemum being now regarded as a winter as well as an autumn flower. There are now long lists of varieties published that are said to be suitable for Christmas supply, but so far I find very few of the later introduced sorts that surpass some of the old well-tried kinds. At present the best whites are Niveum, L. Canning and Princess Victoria. These are of excellent habit, throw up plenty of good strong cuttings, and with anything like reasonable care may be relied on to come in at the time required. Yellows are now in as much request as whites, and W. A. Lincoln is still a good reliable sort. Christmas Gold is, as its name implies, of a beautiful golden yellow, and that good old orange kind called E. G. Hill is, without any special care, at its best at Christmas. Monsieur Bergman is of a beautiful bright yellow, but is not naturally so late as the preceding. There are several varieties with dark flowers, notably the old Cullingfordi, that may be had late by special culture, but few of them are naturally so late as the white or yellow kinds above named.—J. G., Gosport.

Chrysanthemum Hairy Wonder.—I cannot quite agree with "H." when he says we rarely see this variety, although his remarks concerning the hairy section in general are correct. Of all the hairy novelties introduced since the advent of Mrs. Alpheus Hardy, the one bearing the name of Hairy Wonder is the oftenest seen and is the best. At nearly all the metropolitan parks it has been shown in very good form this season, and it looks like remaining long after the others have gone. The next most popular variety appears to be Louis Boehmer. Looking over my notes for 1899, it is surprising how few of these hairy novelties are now grown. Three years ago M. Nonin had a large number in his group at the Paris exhibition, and they were certainly well done, but when I visited his nursery last month I only found one variety worthy of note, and that was a new one called Myrto, of a pretty shade of soft pink on a silky white ground. At Lyons there were very few, *Enfant des Deux Mondes* (white), *Leocadie Gentils* (pale yellow), and Louis Boehmer being all that were noted. At the nurseries and parks round London, White Swan, Esau, and Calvat's new Professeur Jacquinot were about all I came across that were sufficiently striking to make a note of, and this is rather curious, because only two or three years ago the Southwark Park collection contained a large number of hairy varieties which excited some interest. They may, of course, be there still, but my visit being made early in the season may account for my not seeing them.—C. H. P.

Hardy Chrysanthemums.—It appears to me that S. Arnott, in *THE GARDEN* of December 2, requires something in Chrysanthemums that will never be obtained. The choicer kinds are hardy

enough to go through our usual winters, but the blooms cannot be expected to withstand the effects of frost. I usually put out in the open ground several plants of each of the popular kinds for stock and allow them to bloom outside—at least, they bloom if frost does not spoil them. This season throughout November one might have cut bushels of quite clean, highly-coloured blossoms of all shapes that withstood moisture readily. Of course this (Surrey) is a somewhat favoured locality for gardening, although in my own particular neighbourhood slight early frosts are common. The only valuable outdoor Chrysanthemums are, to my thinking, the early-flowering ones, and here there is room for improvement certainly, although there are now many excellent sorts which flower abundantly through September and October. The well-known Mme. C. Desgrange is a model in habit of growth—so short and bushy—and in freedom of flowering. Ryecliff Glory is another splendid type in every respect, save that it is rather late and is therefore apt to be caught by an early frost. Ivy Stark, Harvest Home, Mme. Marie Masse, Lady Fitzwygram, Mons. Dupuis, Ambrose Thomas and G. Wermig are a few other sorts that are of sturdy growth and abundant bloomers. Source d'Or blooms beautifully in the open in the south of England if the autumn be not unusual in its severity, and this season a yellow variety, Soleil d'Octobre, was especially fine with me. William Seward and William Holmes gave a wealth of rich crimson blossoms. Col. W. B. Smith, Viviani Morel, Charles Davis, Lady Haaham and Lady Byron were also first-rate, but I would not care to recommend them for outdoor culture generally without shelter at flowering time. I remember some years back seeing all the best varieties of those days in full flower in the open. This was near the sea. Possibly many who are favoured by such a position might now enjoy abundance of the choicer Chrysanthemums of to-day were they to take the pains to try them.—H. S.

NOTES OF THE WEEK.

Chrysanthemum Fleur de Marie.—The purity of this fine white Anemone sort is almost proverbial, yet it is not grown so freely as it deserves. Being dwarf in habit, too, it is especially well suited for pot work for decoration.

Hibiscus Archeri.—The blood-crimson flowers of this plant render it a most striking ornament just now in the greenhouse; it would prove undoubtedly so were the blossoms produced with greater freedom. The rich shade of colour and the pretty fringed form of the flowers alike assist in rendering it most attractive. The plant is of sparse habit and rather tall. A coloured plate of it appeared in *THE GARDEN* of May 6 of the present year.

Heliphila scandens.—This pretty climber is singularly adapted for a cool house, particularly such structures as the conservatory with lofty roof. In these places the plants may be allowed to trail naturally, or in a measure so, from the rafters, and when in flower give the prettiest results. The species is also a reliable one for winter flowering, and the pretty panicles of white blossoms appear stronger when the plants have a fairly free root-run.

Notes from a Cornish garden.—I have had the same difficulty as your correspondent from Gosport in obtaining *Clematis cirrhosa* and the very similar *Clematis balearica*. I first saw the former at La Mortola in perfection, and this year came across a house near Bovey Tracey where *C. balearica* covered the whole of the west side. The two plants have only reached here, thanks to the kindness of friends, and I see every cutting of a bundle sent from Ireland in September has grown well, while of a plant of each put in at the same time, *C. cirrhosa* is now coming into bloom. *Galanthus cilicicus* has been in flower here for three weeks.—C. R.

Cypripedium insigne at Syon.—Just now a very fine batch of this old plant may be seen in these gardens. A good-sized lean-to house is set apart here for the cooler kinds, and of these the above is a prominent member, the whole of one side being occupied with large plants. A large number are in 9-inch and 10-inch pots, and now that the plants are well in flower

are making a goodly display. The very fine foliage, too, is an indication of rude health. As here grown, with but sufficient warmth to exclude frost and maintain a healthy surrounding, the plants are naturally late flowering; indeed, this much is the design of Mr. Wythes, who in this fine plant has a most reliable midwinter Orchid, that so coolly grown is capable of greater endurance in a cut state.

Iris stylosa.—Already in the more sheltered positions this valuable winter Iris has begun its flowering. The only position that is at all likely to provide a supply of flowers in mid-winter is one where the plants receive the benefit and protection of a warm wall, that adjacent or even part of a greenhouse or stove suiting well. In some such place a narrow border may be planted with this winter Iris and be found of much value when such flowers are scarce. The protection thus afforded goes a long way to making the plants evergreen, this in turn also helping the flowering.

Roses in December.—The Tea and China Roses have continued to bloom fairly well throughout the entire month, and their delicately tinted blossoms in vase and bowl have afforded a charming foil to the Chrysanthemums that almost monopolise the indoor decoration of November. The single white Macartney Rose has flowered during the whole of November, and in the middle of the month I saw a large plant growing over a low wall on which were nearly four dozen expanded blossoms. This plant commenced to bloom in June, since which time it has not been flowerless for a single day.—S. W. F., *Plymouth*.

Rhododendrons flowering in the open.—It is, perhaps, either owing to the earliness of the variety generally or this and the comparatively mild, open autumn, that a large bush of the above has come into flower at this time. The plant is a large one, possibly 6 feet or more through, and is growing in one of the beds devoted to these things at Kew near to the large Palm house. It is a white-flowered variety, and the earliest buds had become quite prominent, and thus showed clearly at a short distance. The circumstance is unfortunate in the end perhaps, as the chances of a good spring blossom are to all appearance destroyed.

Crassula lactea.—This winter-flowering succulent is not nearly so largely grown for warm greenhouse decoration as it deserves. It is not at all fastidious as to soil, as any ordinary potting compost suits it, provided there is an ample supply of coarse sand mixed with it to make it porous. Cuttings struck early in the spring and grown on during the summer months, and afterwards well ripened up in a frame, flower well the following winter. The plants, being of dwarf habit, come in extremely useful in the winter season both for room and conservatory decoration, when their pretty spikes of white flowers at once arrest attention.—A. W.

Chrysanthemums in the west of England.—As has been the case during the past three seasons, these have added much to the brightness of the November garden, and their deep crimson, orange, gold, sulphur, white, pink and rose tints enliven many a cottage plot with rich colour. In these cottage gardens many old-fashioned varieties are to be found, such as the incurved Mr. G. Glenny and Mrs. G. Rundle, the golden Jardin des Plantes, never excelled for colour except, perhaps, by the recent introduction Modesto, the Christines, the deep maroon-crimson Julie Lagravere, Peter the Great, Val d'Andorre, of a striking chestnut hue, and many others.—S. W. F.

Canarina campanulata.—This very distinct plant is only rarely seen, a fact largely due, perhaps, to the few flowers produced by even strong tubers. Just now an example in flower may be seen at Kew, the somewhat extended growth indicating a rather warm temperature. The flowers are distinctly bell-shaped, drooping, and of a vinous red tone, beautifully veined within. One of these large bells is situated at the extremity of the lateral branches, and as much by its position as the colour at once attracts atten-

tion. With cool treatment or in a cool greenhouse the plant is more dwarf and sturdy, the more or less fleshy or succulent stems firmer. It is rare indeed that it may be described as free-flowering.

Cestrum aurantiacum.—Though scarcely coming under the designation of climber, this distinct and pretty coloured flowering plant is useful in the warm greenhouse at this season of the year. The golden-orange colour of the flowers—a shade of colour rarely seen, in fact—is quite distinct. The plants, however, require to be of a good age before flowering freely, and when this occurs but little pruning will be necessary. A mixture largely of peat, with a fourth part good loam, and some brick rubble freely added together with sand, will suit it well. Careful watering, too, is very necessary, as an overdose or a wet condition of the soil at the root is often attended with injury. If planted out, but little water will be required at this season.

Violet La France.—One can scarcely agree with "D." (p. 456) when he says the newer Violets give "no improvement in colour," &c. Surely the above-named surpasses all else in the single kinds in depth of colouring, or if not, what would "D." consider among older kinds to be on a par with it? I know nothing that can compare with La France in this respect, and we can only hope when raisers tire of giving single kinds of good size they will turn their attention to the foliage. In this latter respect it would doubtless prove a great gain could we but get a fine single kind with a habit of growth similar to that of Marie Louise. Unfortunately, it frequently happens that single-flowered kinds in more things than Violets possess a rather strong habit, and this may take some time to correct, to say nothing of overcoming it altogether.

The Chrysanthemum rust has increased during the past year, and even in the open air many collections are affected, while under glass the disease has in some cases had disastrous effects. Where gardens are at present free from this scourge the greatest care should be taken that the home stock should be exclusively relied upon for purposes of propagation, and that no cuttings from outside sources should be admitted. In this manner the infection may be warded off, though very possibly, in course of time, spores of the fungus may be carried into the garden and contamination take place. How long immunity can be assured by isolation it is impossible to say, but in view of the rapid spread of the disease, such a course is well worth a trial, and I am anxious to see for what length of time a healthy collection located in a valley a good quarter of a mile from the nearest plants of the same race, and which it is intended shall be kept rigidly isolated, will remain clean.—S. W. F.

Erigeron speciosus superbus.—Sharp frost has reached us at last, and among the flowers to which we shall have to bid a long farewell is *Erigeron speciosus superbus*, which has given us its second crop of bloom. It is difficult to speak too often or too favourably of this plant, which is yet absent from many gardens in which it would form a veritable treasure. I have been told, I admit, that it does badly in some gardens. Why this is the case one is at a loss to know. I have seen it doing well in even colder and less promising places than those in which it is said to have failed. Either for garden decoration or for cut flowers it is worth more than the little trouble it gives to secure a profusion of its violet-purple flowers, much of whose beauty consists in their narrow petals. Its fault for the garden consists in its need of support, unless in a position protected from wind; it soon gets blown down, and then the blooms come with bent stalks, which make them difficult to arrange to advantage when cut.—S. A.

Begonia socotrana.—Pretty batches of this plant now in flower at Kew in the No. 7 range afford visitors a good idea of comparison with at least one of its offspring, viz., *B. Gloire de Lorraine*. The colour and the form of the blossoms in these two are singularly alike, while the nearly

orbicular leaves of the former are quite obliterated in the progeny. Nor, indeed, is there much to be seen of the other parent, *Begonia Dregel*, beyond the generally closely-formed habit. The rather fleshy leaves of *Gloire de Lorraine* in part point to the above-named, but in no other respect. That it should have so closely inherited both colour and form of the flowers while renouncing all else of the one kind is both curious and interesting. At the same time, the lovely baskets of *Gloire de Lorraine* are a picture of colour and beauty at this dull season, pointing to its great value for brightening the warm conservatory and other such places at this season, when, with the collapse of the Chrysanthemum, so much brightness is wanted.

Kniphofia Tucki.—As "E. J." says on page 459, one of the chief attributes of this Torch Lily is its early flowering. In brightness of colouring it is not to be compared with some of the hybrid Torch Lilies which are now so numerous, and which form useful plants in their own time. *Kniphofia Tucki* is, indeed, deficient in colour, and could stand some improvement in this respect. It is, however, the earliest, with perhaps the exception of *K. Rooperi*, which in some localities seems to bloom more or less throughout the year. It is, however, even more deficient in brightness than *K. Tucki*, although, as already remarked, the latter could with advantage be improved upon. I do not know that we have much need of early-flowering Tritomas, as there is no lack of material at the season in which *K. Tucki* blooms, but they can be advantageously used in some places. It is possible to have a surfeit of Torch Lilies, and if we had them throughout the summer we would probably tire of their stately spikes. *K. Tucki* proves fairly hardy without protection.—S. ARNOTT, *Carsethorn, N.B.*

Sedum brevifolium.—The interesting notes advocating the use of *Sedum Lydium* and *S. hispanicum* var. *glauca* as thin carpet plants, for which they are admirably adapted, lead one to remember that one hardly ever sees any mention of the very beautiful little *Sedum brevifolium*, one of the dwarfest of the genus. One of its features is the tone of its colouring, which has been well described in "Hardy Flowers" as a "pinkish mealy tone." The truth is that one can hardly find terms accurate enough to depict the precise colour of its foliage. For some years there was a very pretty form grown in the Royal Botanic Gardens of Edinburgh as *S. brevifolium* var. *Pottsi*. This variety is probably there still, but I must have failed to observe it on any of my recent visits. This has a greater variety of colour and tint. I am always puzzled to know why this little Stonecrop does not succeed in my garden, where so many increase so freely as to become rather troublesome. Probably there is too much moisture in the air. It appears to do well at Edinburgh, where the climate, if colder, is drier.—S. ARNOTT.

Crocus hyemalis.—I have never been able to understand why the typical *Crocus hyemalis* should be so difficult to obtain while the variety *Foxi* is easily procured in some quarters. Possibly we have no great reason to regret this, as the drawings of flowers of the type give an impression that it is not so pretty as Fox's Winter Crocus, whose black anthers give it a most distinct character. Still, collectors of these flowers like to have an opportunity of comparing the actual flowers instead of being satisfied with a drawing, however well done and however truthfully coloured. I must confess that I have never been able to obtain the type of this Crocus. When it was ordered, Fox's variety was always sent instead. I have seedlings from seed purchased under the name of the type, but these have not bloomed, and as corms from the same source gave flowers of *C. h. Foxi*, one has little hope of getting the type among the seedlings. As it is said to be a common species in its own country, it is strange that it is so scarce in the trade. It is unfortunate for the future of *Crocus hyemalis* in our gardens that it is so easily spoiled by rain. Unless protected overhead it soon be-

comes a shapeless piece of pulp devoid of beauty. Protection is easily given, but the true place for it in our climate seems to be in a frame or in pots in an alpine house or cold greenhouse.—S. ARNOTT.

XL ALL VAPORISING COMPOUND AND THE PHARMACEUTICAL SOCIETY.

It is strange that the XL All compound should not have been attacked before now. How is it that the Pharmaceutical Society has left it alone until it has become known to practically every gardener in the kingdom, and has become all but indispensable in the garden as an insect destroyer? It has been suggested that had not the trade in this gardener's requisite developed to its present proportions, the attention of the council of the Pharmaceutical Society would not have been drawn to it by its members. Why this sudden discovery of the fact that the XL All compound is a preparation which contains a percentage of nicotine, and why the fear that some one will drink it when it is manufactured and sold expressly for fumigating greenhouses? Why has it taken six years for them to discover that this is so dangerous after it has been sold by nurserymen, seedsmen and florists for this length of time without a single accident? To all unbiased minds the answer suggests itself.

It appears that neither the Pharmaceutical Society nor its members have any control over the sale of carbolic acid or its preparations, and these can be freely purchased anywhere for domestic use, and seem to stand about some households quite unguarded. If this and other poisons of a similar character can be and are sold for household purposes without any restrictions, surely the horticultural trade may claim the right to sell a preparation of nicotine for use (quite apart from the dwelling house) in greenhouses which in nine cases out of ten would be stored in an outhouse in the garden. It is the opinion of many that all interested traders who have suffered from similar jealous and needless interference at the hands of the Pharmaceutical Society should organise a society of their own to watch over their interests and bring their grievances before Parliament at the earliest date possible with a view to getting the Act of 1868 amended, so as to enable agents other than pharmacists to sell poisonous preparations for technical purposes (in the manufacturers' original packages) to the trades and professions which in the ordinary course of business it should be their legitimate right to supply, of course under necessary restrictions. The Pharmacy Act of 1868 as affecting the sale of poisonous preparations for technical purposes does not appear to be understood by one and all alike. It must be clear to all but the most nervous people that the skill of a pharmacist is not at all necessary to sell a farmer a tin of sheep dip. Why, then, should not the farmer be able to get his sheep dip from the same source of supply as his other farm requirements?

Again, why should a gardener not be able to order his fumigating material or weed-killer from his seedsman together with his bulbs or seeds, thus saving the expense and annoyance of having to obtain one requisite from one source and one from another? Next we shall hear of nurserymen and seedsmen being prosecuted for selling any kind of insecticide.

I shall be glad to receive communications and suggestions from anyone who is willing to join such a movement as is above indicated.

G. H. RICHARDS.

128, Southwark Street, London, S.E.

The conference mania.—Every opportunity is now seized upon for getting up an anniversary festival of some sort, and now the innocent Sweet Pea has furnished an excuse for one. At a recent meeting held in Edinburgh it was agreed "That it is advisable to organise an exhibition of Sweet Peas in London in July, 1900, in order to celebrate the bi-centenary of its introduction to

Great Britain," and that a conference of admirers and growers of Sweet Peas be convened for the purpose of classifying the varieties into groups of colour and form. Another reason for this needless proceeding is shown in clause 5, which the preliminary committee has drawn up: "A banquet and other social observances as may be deemed advisable!" If we are going to have a bi-centenary and a banquet to memorialise the introduction of every popular flower, we shall have a lively time. Sir George Lewis said a memorable thing in declaring the world would be an agreeable place if it were not for its amusements. We may now add, to our sorrow, that it will become to many people a very hard place if the busybodies who get up these needless functions on such slender pretexts are not controlled in some way by the sober-minded public. The notion that a conference is needed for the classifying of the Sweet Pea into "groups of colour and form" is not true, and is very silly, to boot.

PUBLIC GARDENS.

Rochester pleasure ground.—The Dean and Chapter of Rochester have declined to sell the freehold of The Vines in that city to the corporation. They have, however, granted another lease to the corporation which continues the use of the ancient vineyard of the monks as a public pleasure ground.

A new park for Brighton.—The town council will shortly be recommended to purchase a new park for Brighton, which we learn is obtainable for a reasonable sum. It is situated to the north of the town, just outside the boundary, and is 190 acres in extent, or more than three times the size of Preston Park.

Tudor House, Bromley.—The Parks and Open Spaces Committee again recommended that the house at Bromley Recreation Ground, known as Rutty's House, should be cleared away and the site laid out as part of the recreation ground. The matter has twice before been before the council, and on each occasion the recommendation of the committee to demolish the house has been referred back.

Open spaces.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., Mr. C. J. Stevens presiding, it was reported that the Local Government Board had assented to the proposed contribution by the Willesden District Council towards the Dollis Hill scheme, and that steps could now be taken to complete the purchase of this estate of 98 acres as a public park. The secretary stated that the Brockwell Park Extension Committee, upon which the association was represented, formed for securing the addition of 42 acres to Brockwell Park, at a cost of £72,000, had been actively engaged during the month in approaching various South London vestries. Lambeth had agreed to subscribe £15,000, and it was hoped that Camberwell, Newington, and St. George the Martyr, Southwark, would also become contributors. It was decided to render help in the laying-out of a children's playground in Sumner Road, Camberwell, and to take steps to oppose any Bill that might be introduced for enabling the Battersea Latchmere allotment land to be used as a building site, the land having been formerly part of a common. It was reported that the attention of the various county councils in England and Wales had been drawn to the Commons Act, 1899, a clause in which, promoted by the association, conferred upon all county councils the powers of the London County Council in regard to providing open spaces themselves or assisting local authorities to do so.

National Dahlia Society.—A committee meeting will be held by kind permission of the Horticultural Club in the club room at the Hotel Windsor, Victoria Street, London, S.W., on Tuesday, December 19, at 2 p.m. Agenda: Report for 1899, schedule for 1900, financial

statement, and other business.—J. F. HUDSON, Hon. Sec.

Royal Horticultural Society.—The last meeting this year of the above society will take place next Tuesday, the 19th inst., in the Drill Hall, James Street, Westminster, when the Fruit, Floral and Orchid Committees will meet as usual at 12 o'clock. Election of new Fellows at 3 p.m.

The weather in West Herts.—A great fall in temperature took place during the past week. On the 7th the highest reading in shade was 54°, or 10° above what may be regarded as a seasonable temperature; whereas five days later the shade temperature never rose higher than 31°, which is 13° colder than is seasonable. On four consecutive nights the thermometer exposed on the lawn showed from 10° to 12° of frost. The temperature of the soil has fallen considerably during the week—indeed, as much as 10° at the depth of a foot. The ground is at the present time at about an average temperature at 2 feet deep, and about 3° colder than is seasonable at 1 foot deep. There was a little rain at the beginning of the week, and on the morning of the 15th the ground was covered with snow to the average depth of 1½ inches. During the last eight days there have been altogether only about two hours of clear sunshine, and on four of these days no sunshine at all was recorded.—E. M., Berkhamsted.

Portlandia grandiflora.—I regret to have to inform you that the plant figured in THE GARDEN of September 30 from a photograph sent by me was wrongly named. It was received by me under the name of *Portlandia grandiflora* some years ago from a reliable source, and it never occurred to me to doubt the nomenclature, and thinking it a well-known garden plant I never examined it botanically. It was recently pointed out to me that the corolla tube was of quite a different shape from that in the figure of *Portlandia grandiflora* in the *Botanical Magazine*, and on examining the plant carefully it was apparent that it could not be a *Portlandia*, but rather a *Brunfelsia* or some allied genus. Mr. Watson has now identified it as *Brunfelsia undulata*, of which there is a figure in the *Botanical Register*, pl. 228. It is a most beautiful plant, and I trust your illustration will cause it to be more generally grown. I have never met with this species before, though one or two others of the genus are not uncommon in nurseries. It is not even mentioned in Nicholson's "Dictionary of Gardening."—R. H. B.

OBITUARY.

Mr. Alfred Outram.—We regret to announce the death of Mr. Alfred Outram, who expired suddenly at his residence in Moore Park Road, Fulham, on Friday last, the 8th inst., aged 52 years. Mr. Outram was born in Lower Tooting and had been connected with gardening from his boyhood. He started in the once-famed nurseries of Messrs. Rolleston and Sons, Tooting. From there he went to Messrs. Veitch and Sons, of Chelsea. He next entered the service of Messrs. B. S. Williams and Son, of Holloway, with whom he remained over twenty-two years. For some time he was connected with Messrs. Sutton and Sons, of Reading. Hosts of friends will sympathise with his widow and family in their great bereavement.

Clematis cirrhosa.—Mr. Groom (see p. 457) will, I think, have no difficulty in obtaining this plant from Mr. T. Smith, Daisy Hill, Newry, Ireland, in whose catalogue he will find many other more or less unusual and interesting plants.—G. PIM.

Names of fruit.—*Bury St. Edmunds*.—1, Calville Rouge; 2, Annie Elizabeth; 3, Winter Peach; 4, Downton Pippin; 5, Lamb Abbey Pearmain; 6, Kedleston Pippin.—C. H. Percival.—Apple Scarlet Nonpareil.

Name of plant.—*W. A. G.*—*Cassia floribunda*.

THE GARDEN.

No. 1466.—VOL. LVI]

[DECEMBER 23, 1899.

INDEX.

(Illustrations in *Italics*.)

Orchard and Fruit:—

Apple Court pendu Plat ..	493
Apple Duke of Devonshire ..	493
Apple Flanders Pippin ..	492
Current, Black, a profitable ..	493
Fruit borders, sloping ..	493
Fruit rooms ..	493
Fruit trees, protecting, from ..	493
rabbits ..	492
Peach Prince of Wales ..	492
Peach trees, unailing out- ..	492
door ..	492
Pear Beurre de Jonghe ..	493
Pear Beurre Hardy ..	493
Pear Doyenne du Comice ..	492
Pear Glou Morceau ..	492
Pear Marie Louise ..	493
Pear Winter Neli ..	493
Pears, birds and wasps at- ..	491
tacking ..	491
Solution, caustic alkali ..	493
Strawberry Duke of Edin- ..	492
burgh ..	492
Trees, fruit, planting in ..	491
heavy soils ..	491
Vines, outdoor v. inside bor- ..	492
ders for ..	492
Wall, Apples on ..	493

Chrysanthemums:—

Chrysanthemum C. W. Rich- ..	494
ardson ..	494

Chrysanthemum Miss Rose ..	491
Chrysanthemum Mrs. Lang- ..	491
try ..	491
Chrysanthemum R. H. Pear- ..	494
son ..	494
Chrysanthemum sports ..	494
Chrysanthemums, coddling ..	491

Kitchen:—

Carrots, long v. short ..	496
Carrots, early stump-rooted ..	496
Mushroom winter culture in ..	495
the open air at Bromley ..	495
Mushrooms all the year ..	495
round ..	495
Parsnips ..	496
Potato Carter's Snowball ..	496
Stachys tuberosa ..	496
Tomato—fruit or vegetable? ..	496
Tomato Royal Chester ..	496
Tomato Stirling Castle ..	496

Stove and Greenhouse:—

Ardisia primulifolia ..	498
Begonia imperforata gi- ..	497
gantea rosea ..	497
Begonia secotiana, hybrids ..	497
of ..	497
Croton Eugenie Chantier ..	496
Cyclamen, repotting ..	497
Grappenhall, view in the con- ..	497
servatory at ..	497

Lily of the Valley in flower ..	496
Luculia gratissima ..	498
Philodendron, the, in fruit ..	496
Poinsettias ..	498
Winter, brightness in the ..	496

Orchids:—

Ada aurantiaca ..	499
Dendrobium bigibbum ..	500
Masdevallia amabilis ..	499
Odontoglossum Sanderianum ..	500
Odontoglossum, natural hy- ..	499
brid ..	499
Oncidium Cavendishianum ..	499
Oncidium, natural hybrid ..	500
Orchids, basket ..	499

Garden Flora:—

Iris albo-purpurea ..	500
-----------------------	-----

Flower:—

Burkholderia salicifolia ..	501
Callitropis horticola ..	501
Chamaeas Court, Teckesbury ..	501
Cypripedium calceolus, natu- ..	502
ralis ..	502
Gloucester, a lawn garden in ..	501
Mignonette, open-air, in ..	501
November ..	501
Pyrethrum uliginosum ..	501
Tropaeolum tuberosum ..	502
Violets, strong-growing ..	502

Week's Work:—

Fruits under glass ..	502
Kitchen garden, work in the ..	508

Trees and Shrubs:—

Alders, the ..	501
Alnus incana ..	504
Alnus glutinosa ..	504
Alnus glutinosa laciniata ..	504
Alnus viridis ..	504
Smilax, the hardy species of ..	505
Smilax Cantab in the Cam- ..	506
bridge Botanic Gardens ..	506
Trees at Corsham Court ..	505

Ferns:—

Alsophila australis ..	507
Dicksonia antarctica ..	507
Ferns, flowering ..	506
Ferns, sunlight for ..	507
Gleichenia circinata ..	507
Nephrolepis exaltata ..	507
Pteris caerulea ..	507

Societies:—

National Auricula ..	509
National Carnation and Pie- ..	509
tes ..	509
National Chrysanthemum ..	509
Royal Horticultural ..	507

Notes of the Week:—

Abelia uniflora ..	510
Agave Woodrowi ..	509
Bouvardia odorata alba ..	509
Chrysanthemum Mme. C. ..	509
Dasgranges ..	509
Chrysanthemum Princess ..	509
Victoria (yellow variety) ..	509
Chrysanthemum Winter ..	509
White ..	509
Colchicum Sibthorpi ..	510
Conference mania, the ..	510
Euphorbia fulgens ..	509
Helleborus altifolius ..	509
Plumbago capensis alba ..	509
Rhododendron Princess ..	509
Royal ..	509
Salvia splendens grandiflora ..	509
Sedum brevifolium Pottsi ..	510
Senecio macroglossus ..	509
Wallflower, Mr. H. Crew's ..	510
double ..	510

Miscellaneous:—

California winter notes ..	503
Commons and footpaths, ..	510
public ..	510
Epiphyllums ..	502
Frost in cold frames ..	496
Jasminum nudiflorum ..	500
Weather, the, in W. Herts ..	510
Weather, the, in Wilts ..	510

ORCHARD AND FRUIT GARDEN.

PLANTING FRUIT TREES IN HEAVY SOILS.

GIVEN a light or medium soil with ample drainage, planting suitable trees and the attainment of good all-round success are comparatively easy matters. It is in dealing with heavy, retentive soils that the inexperienced so often meet with failures. So-called economy often means increased labour and outlay in the end, and it is far wiser to plant a dozen or two trees only after due preparation of the ground than to rush headlong into planting for planting's sake. I believe that plots which can be assigned to fruit culture entirely without any regard to a grass surface for cattle or sheep should be trenched, or if too shallow for this operation, turned up one spit deep in autumn or early winter and allowed to remain unplanted till the following November, the improvement effected in the soil by such treatment and the consequent greater speed and freedom with which the roots of the newly-planted trees lay hold of the rooting medium warranting it. During the summer, whether weeds and rubbish make their appearance or not, several harrowings or scufflings with five-tined forks should be given, no barrier then existing to a speedy completion of planting when the proper date arrives. Of course, where the loam too nearly approaches clay to allow of an effectual escape of surplus water, draining the plot, however small, by means of drain pipes must precede trenching, nothing being so detrimental to free and short-jointed growth as a cold, stagnant root-run. In the case of clay subsoils overlaid with only a medium depth of passable loam, it is well where labour is plentiful to lay the surface on one side, burn, say, the next 12 inches, and, the burning completed, mix the two together, adding as well road scrapings, mortar rubble, charred wood, or burnt garden refuse. Where capital has been scarce I have known this

plan adopted for, say, a space of 6 feet round where each tree is to stand, first placing a few inches of clinkers over the bottom to act as drainage. This will suffice for a few years, when, if need be, a further similar addition may be made. I am opposed to adding animal manure as a rule to heavy composts at planting time, provided the staple is not of a hungry nature, as it almost invariably ends in the formation of rank, long-jointed wood, which even root-pruning frequently takes years to remedy. Assistance by surface mulchings can always be given. I have always advocated the use of stations composed of tiles, slates, or similar material to check descending tap-roots and induce the fibrous portion to take a horizontal course near to the surface, where they will reap the full benefit of sun and air. A foot from the top is a good distance at which to fix these. In extra strong, cold mediums, bush trees, or at any rate those worked on the Paradise in the case of Apples and Pears on the Quince, are imperative. These naturally root nearer the surface than Crab and Pear stocks, and, if necessary, the mounding system can be adopted with bush trees, as high winds have less effect on them than on tall standards.

By the mound system I mean keeping the roots well up almost on the surface and forming mounds over them. This plan has often been attended with capital results where the soil has been shallow, poor, or gravelly. A very important thing when dealing with the above sites is early planting. As soon as the trees can be safely lifted the work should be done, then they get a good root-hold before bad weather sets in. Neglect planting until, say, the middle of December or later, and the roots remain inactive till spring, which is an evil almost, in fact, as bad as spring planting. Firm planting of Vines and Peach trees is generally deemed imperative, but how often are many fruit trees left in at least a semi-loose condition? Provided abundance of correctives is incorporated, Apples, Pears, and Plums can hardly be made too firm,

and for this reason it is necessary to catch the soil in just the right condition—on the dry side. The final treading should be given previous to the last layer of soil being laid on. The supporting stakes should also be inserted soon after the tree is in position, as the compost can then be rammed around it piecemeal and firmness secured. Hammering the stakes in when planting is completed is unsatisfactory in more ways than one. It sometimes happens that trees in heavy soil are considered safe from drought, and are therefore left even in a dry summer to take care of themselves, but I have known fine trees ruined by neglect of this simple operation, and perhaps even left unmulched, when one moderate soaking in April or May would have sufficed. Sometimes cold soil orchards also occupy exposed positions, in which case some varieties are more certain to succeed than others. The following varieties of Apples should in such cases be included: Lord Grosvenor, not liable to canker like Lord Suffield; Golden Spire, unsurpassed for cold, damp situations; Seaton House, an Apple which is gradually gaining favour; Lady Henniker, Northern and Yorkshire Greening, and Sturmer Pippin. NORFOLK.

Birds and wasps attacking Pears.—In answer to "W. S." I am sorry to say that my experience with regard to Pears on walls being injured by birds and wasps is quite contrary to his, as here they attack the fruits in just the same manner as they do those in the open garden. As soon as the fruits are fully grown and the flesh becomes at all sweet they commence their depredations, and the last few seasons I have been compelled to net the trees as soon as the earliest sorts begin to ripen. This keeps off the birds, but is, of course, useless for preventing wasps doing harm. With regard to the wasps, I have conducted a regular crusade against them for the past few years, and the men told off to search out their nests have been so successful that several hundreds have been destroyed. Wasps in consequence were much less numerous last summer, but birds, owing to a scarcity of food, attacked

the Pears in a most determined manner, and it was only nets that were in good order and free from rents that would keep them at bay.—A. W.

Peach Prince of Wales.—I was pleased to read "A. W.'s" note on Prince and Princess of Wales Peaches. One seldom meets with the former, but I do not know a more reliable variety. Its shape is, perhaps, less perfect than that of some others, but colour and flavour are all that can be desired. "A. W." gives his experience of it as grown on an open wall. I have only grown it in a cool lean-to Peach house, where it never missed a crop, large numbers of tiny fruit having to be removed annually. One distinguishing feature of this variety is its exceptionally small flowers, which, however, are always furnished with a large amount of pollen, this being very useful for fertilising less certain sorts growing by its side. I think Prince of Wales should be included in all late houses where room can be found.—GROWER.

Strawberry Duke of Edinburgh.—What has become of this Strawberry? Some fifteen years ago it was a favourite with many, especially in the midlands. I believe it was one of Dr. Roden's seedlings, and although never, so far as I am aware, a market Strawberry, was esteemed in private gardens for its handsome appearance and good flavour. There were, if I remember rightly, two Dukes of Edinburgh, Dr. Roden's being the better. I remember what fine dishes of this Strawberry Mr. Edmunds, of Bestwood, used to show at Nottingham and elsewhere, he himself telling me that it was one of his favourites and did better in the Bestwood soil than most others. Is it because the Duke was not a sufficiently prolific kind or capricious that, like many others, it has fallen, or nearly so, out of cultivation?—J. CRAWFORD.

Pear Doyenne du Comice is next to, if not equal to, Marie Louise in point of flavour and general excellence, and is in season till the end of November. The fruits, which grow to a very large size when well cultivated, have a yellow russet skin when grown out in the open on a bush, but of a clear lemon-yellow, heavily flushed with red on the sunny side, when grown on a wall. The tree makes a fine prolific pyramid on the Quince, and a few cordons worked on the same stock should always be grown on a south or west wall in order to make sure of a crop should the trees in the open garden fail. Trees on the Pear produce fruits equally as large as on the Quince, but their skins are greener and lack the bright red flush already alluded to. With regard to flavour there is no difference whatever, and the same remark applies to their bearing capacities.—S. II.

Apple Flanders Pippin.—It is very singular how well some varieties of Apples will succeed in one district and not in another, and with, perhaps, but a few miles separating the two. The Apple named above comes under this category, for in the Easton, Ledbury, and Putley districts of South Herefordshire it is a marked success, while here at Stoke Edith, only four miles distant from the last named district, it neither grows so large nor is it so beautifully coloured. Mr. Coleman always entertained a very high opinion of this Apple, and in no other part of the country have I seen it succeed so well as it does in the above-named districts. There is something in the nature of the soil no doubt which causes this marked difference, and this same variation in the character of Apples, Pears, and other fruits is no unfrequent occurrence in other parts of the country. Some remarkably fine specimens of Flanders Pippin were exhibited at the Hereford show in November last. It is an excellent cooking market variety and succeeds best when grown as a standard.—A. W.

Unnailing outdoor Peach trees.—This is usually done with a view to retarding the trees, keeping them away from the wall in spring until the fast swelling buds make it imperative that they are again fastened up. But there are other distinct gains in removing the trees. For instance,

although in many cases the shred used decays before the branch has swollen sufficiently to do much harm, in others the wood is bound and the circulation of sap impeded, an impossibility where the trees are taken down annually. Again, insects of all kinds like the shelter of the shred, and when winter approaches they seek all such places. Of course they are disturbed when the shreds are removed in taking down the trees. But the greatest advantage of all is the ease with which one may get all round the wood for cleaning purposes, and this should be an all-sufficient reason for removing them annually. Trees badly affected with red spider, for instance, can never be cleaned properly by applications of insecticide from the front alone. Their progress is hindered, but they are not thoroughly cleared, and in the warm corners on the back of the trees they have a capital breeding ground, the young insects coming out in thousands in spring to feed on the tender foliage, and green fly finding suitable hiding-places until the foliage is ready for them.

OUTSIDE V. INSIDE BORDERS FOR VINES.

My attention was lately drawn by the gardener here to the fact that in one vinery, which had a new inside border of turf and bones a few years ago, the Vines did not seem to relish the food provided for them, but turned their roots to the outside border. This is a mass of root-lets. Can you suggest a cause, and, if so, a remedy?—H. PENRY POWELL.

* * In very few instances has the making of both inside and outside borders really worked well, and, all things considered, providing both must be regarded as an expensive fad not warranted by results. In building an early vinery I would take every precaution, including that of forming the front walls with cement instead of mortar for fixing bricks or stones to keep the roots inside. I would also have the roots of mid-season and late Vines confined to an inside border. This arrangement has its drawbacks in many instances. The difficulty is presumably met by constructing the house in such a way as to admit of the Vines rooting in or having access to both inside and outside borders. The brickwork in front consists of a series of arches, but as the start is usually made with an inside border only and the arches are temporarily bricked up and ordinary soil banked up against these, sometimes the original programme is actually carried out, the arches being opened and outside borders completed in due course. Whether this is done or not, the result is much the same—the roots find their way through the walls, and so rapidly do they increase, that in the end few root-fibres are to be found in the inside borders. When the soil outside to which the roots have access is of a nature to benefit the Vines, their owner need not worry about the fact of the inside border being deserted, but should much cold clay abound, then bad times are in store, shanking and other evils following. That once happened in connection with the famous Longleat Vines. Once a single root finds its way through a wall into soil of any kind it quickly commences to spread and thicken, flattening between the bricks and swelling abnormally on the outer side. In far too many cases inside borders are mismanaged. They are much trampled on nearly all the year round; they are literally burnt up in the vicinity of hot-water pipes; in many instances are made sloping from the front walls, and gradually become so hard that neither moisture nor air can properly penetrate them. What may be thought heavy applications of water or liquid manure may be given, but how much of this reaches the roots? Inside borders should be made level to facilitate watering; the hot-water pipes distributed evenly through the house, not massed just in front of the position usually assigned the Vines. There should be as little trampling

on the borders as possible, and if this cannot well be avoided, the surface of the border ought to be carefully loosened prior to each watering, or as often as found solid, while water should be applied as often as the border is found approaching dryness. Too much or too little water is injurious, and occasional weak supplies of liquid manure or surfacings of special manure are far safer and more effective than a few stronger doses. It does not injure the Vines if the border is probed deeply at places in order to be able to determine whether either water is required or enough has been applied. A mulching of short strawy manure is of the greatest service to an inside border. It prevents a rapid loss of moisture, saves the surface from becoming unduly hard and dry, and attracts the roots to the surface where they can easily be kept active. If these lines are followed, Mr. Powell's Vines may yet be induced to take fuller possession of the inside border, but the roots will always have a predilection for the outside.

Should it be thought desirable to have the roots inside, measures must be taken to bring this about. Probably there is a considerable number of old roots in the inside border, and if it had been worn out I would have advised removing all the old soil, shortening these old roots, and laying them evenly through a width of good new compost. The border not being stale, all that need be done is to remove the surface of the border to the extent of burying many of the top-most roots, and after notching the more woody portions in places, either relaying them all in or top-dressing them, according to circumstances, with a mixture of fresh loam, leaf-soil, partially decayed stable manure, fine mortar rubbish and burn-bake (the residue from a slow fire) in equal parts. A mild hotbed on the top of this when the Vines are started would hasten root action considerably, and in any case a mulching of strawy manure should be given. If kept properly supplied with moisture, borders so treated this autumn or winter should be well occupied by roots before the leaves fall next autumn, when all the roots that run out may safely be cut away close up to the wall or, in the case of archways, sufficiently inside to admit of bricking up. Afterwards keep the front wall bared on the inside, or otherwise the old troubles will quickly recommence. Root action is the most brisk after the crops are matured and before the leaves fall, and if the outside roots are cut off in good time the inside border will be more fully occupied by root-fibres. Vines treated in this way have produced improved rather than lighter crops the following season.—W. I.

Pear Glou Morceau.—This is not what may be termed a generally popular Pear, as it is not good in all places alike. However, where it does succeed it is one of the best large-fruited varieties we have for January use. To have it in perfection it should be given a south wall, allowing the fruits to hang as long as it is safe to do so before gathering and storing them. The tree makes a perfect cordon on the Quince and bears remarkably fine fruit. It also succeeds on the Pear stock, and may be trained either fan-shaped or diagonally, but, according to my experience, the fruits are not then so highly flavoured as those produced by trees on the Quince. I have not grown it in the open for some time past, as although the trees cropped fairly well the fruits always cracked, and were otherwise blemished, while the trees were subject to canker. By growing a good few trees on walls, as indicated above, a good supply of fruit, and that of the finest quality, can invariably be secured for January use.—S. H.

Protecting fruit trees from rabbits.—Many are the methods employed for preventing rabbits and hares from damaging the stems of newly-planted Apples, Pears, and Plums. Some of the rough-and-ready dressings are effectual enough, provided they are renewed sufficiently often. I think, however, that nothing is better, all things considered, than enveloping the stem

of each tree with ordinary wire netting. Most people keep the wire from 9 inches to a foot from the stem and let the bottom into the ground an inch or more, but where rabbits are numerous they will sometimes burrow beneath and reach the bark. If, as a correspondent lately remarked, the base of the protector is turned outwards several inches and then firmly embedded they seldom find their way beneath. A better, or at least as good, and much easier way is to allow the netting to go within a couple of inches of the stem. Join the two ends securely by means of a pair of pincers. Rabbits do not like the movement of the wire when touched, and rarely scratch beneath it; in fact, although I have practised this mode of protection for many years, I never remember the least damage being done. It takes a very little time to do fifty or a hundred trees if the pieces of netting are all cut off previous to starting the job.—J.

SLOPING FRUIT BORDERS.

"A. W." recently penned some interesting remarks on this subject, and is correct in stating that the sloping border, particularly when the angle is a very sharp one, entails much labour in dry summers. All the same, the roots must be influenced by the sun's power to a far greater extent under such conditions than when occupying flat or nearly flat borders. The great thing is to draw the line at moderation, then if the surface is kept in a loose condition, what rain does fall will find its way in, being pretty evenly distributed, and artificial applications prove effectual. On sloping wall tree borders evaporation is far more rapid than from flat borders, but more often than not a heavy shade is created by the growth of various dense-growing vegetables, which is, of course, an evil in itself in more ways than one. To give fruit trees the best chance no crop should be allowed on the border, this being nicely mulched with any spare material, such as old Mushroom manure. Only in large gardens can this system be carried out. In regard to watering sloping fruit borders, I have seen medium-sized dams formed by ridging the soil up, say every 3 feet or so, in order to check the water and secure its entrance to the border. Sloping borders are, in my opinion, imperative in the case of early vineries and Peach houses, and the old-fashioned style of elevating them considerably has much to recommend it. With a view to this, new vineries and Peach houses should be built above the ground level and entered by steps. It is in this style of forcing house that I have seen the best and most constant crops of early Peaches and Grapes, the reason being that the root-run is immensely calculated to produce and preserve in the best condition a host of fibrous rootlets, all other conditions being equal. Of course such borders require judicious management through the hot summer weather which often follows the ripening of the crop.

EAST ANGLIAN.

Pear Winter Nelis.—This still retains its position in the front rank as a highly-flavoured variety for midwinter use. Its season I find depends a great deal on where it is stored. If placed directly in the Pear room when gathered it oftentimes ripens at the latter end of November and early in December, but if stored in the cooler atmosphere of the Apple room it then comes into use at Christmas and lasts into January. This is the latest period that I have ever had it. I gather my best fruits from cordons on the Quince stock, they often being twice the size of those produced by trees on the Pear. On the Quince it is a vigorous grower and produces an abundance of fruit-buds, so much so that every now and again it becomes necessary to thin them out somewhat severely. Root-lifting is also requisite every few years to keep the trees in good bearing condition. Winter Nelis also succeeds well fan or diagonally trained, and is then very productive. The merits of this Pear are so good and so generally well recognised that one or more trees,

according to demand, should find a place in every garden.—S. E. P.

Apple Duke of Devonshire.—Until I saw this Apple shown at Norwich in November I had not met with it for several years. I believe it is more common in Scotland than on this side of the Border; indeed, I was once informed that the Caledonian Society always included in their schedule a class for Duke of Devonshire. The colour is pale lemon, sprinkled over with russet. The flavour, however, together with its long-keeping powers, is its chief recommendation. Like a few other of the best dessert kinds, it must be allowed to hang on the tree as long as possible to secure it in its best form, and such are its merits, that it well repays the trouble of casting a net over the tree to protect from birds, which are very apt to make incisions close to the stalk. I would advise all who think of adding to their list this winter to give Duke of Devonshire a trial.—NORFOLK.

A profitable Black Currant.—Amateurs and these having little experience in fruit culture are sometimes at a loss to know what Currant to plant for profit when the extent of ground at command is limited and only one variety can be accommodated. I should have no hesitation in recommending Lee's Prolific. Were I confined to one sort only this would, I think, be my choice. I well remember it first being sent out by, I think, the late Mr. Lee, of Hammer-smith, and how delighted an old gardener I was serving under, and who was very partial to Black Currants, was when the trees he planted bore their first crop. I know Champion or Baldwin's Black is much thought of, and it is doubtless an excellent Currant. In some parts of Kent it appears to do better than any other. Lee's has a good constitution and will be found a generally good doer. In large gardens both may well be planted.—NORWICH.

Caustic alkali solution.—In THE GARDEN of October 28, 1899 (page 343), there is an article, "Is potash a cure for canker," and a caustic alkali solution is recommended for application to the cankered surfaces. I should deem it a favour if you will kindly state the strength of the solution to be used, that is, the amount of caustic potash to the pint of water.—R. L.

* * * You cannot do better than apply the soda mixture, made as follows: A convenient vessel in which to prepare the mixture is an ordinary paraffin cask holding on the average about forty gallons. In this cask 4 lb. of caustic soda should be first dissolved, using hot, soft water. Take care that the boiling mixture does not touch the skin or the clothes of the person mixing. In another vessel dissolve 4 lb. of pearl ash, also using hot, soft water for this purpose. Mix this with the other and fill up with water. The mixture will now be ready for use, and may be applied through a sprayer or a garden engine. It is better not to use a syringe, the solution making it slippery and difficult to hold. See that every part of the tree is well dressed.—ED.

Apples on walls.—On the south coast one would hardly expect to find much wall space allotted to Apples, seeing that nearly all kinds come to perfection in the open, but so greatly has the Apple increased in favour of late years that we find it taking up a good deal of the wall space that used to be occupied by Apricots, Peaches, or Figs, and usually with very good results. Not only is this the case in large gardens, but in small ones, where the enclosing walls are not in many cases more than 6 feet or 7 feet high. For Apple trees trained horizontally such walls answer well, and the produce of young trees of such kinds as Cox's Orange Pippin and other dessert kinds that I have seen during the past few years would seem to justify the owners in planting fruit trees that very rarely fail to crop. As a rule owners of small gardens make very little profit by growing the choicer fruits on their walls, but with the Apple they can hardly fail, and if they get really good kinds to start with and treat them well the produce will be

quite as profitable as the produce of choicer but less certain fruit trees. There is a great demand for highly-coloured Apples, and if Emperor Alexander, Hoary Morning, or Lady Sudeley be grown on sunny walls they will be worth quite as much as Apricots. Cordon Apples take so little space that one may fill up spare places very profitably with them.—J. G., Gosport.

Fruit rooms.—Fruit rooms are often constructed in very unsuitable positions and in a way not at all calculated to preserving Apples and Pears. Fruit rooms should never have a position facing south nor yet be lofty. When facing the sun the interior during October and November often becomes far too hot, causing a too speedy ripening of the fruit, which quickly decays, or at least loses flavour. Even when facing north or east, lofty fruit rooms become too dry—a great evil. One of the best fruit rooms I know of is constructed behind a high bank of earth facing the north. It is entered by a descending tier of steps, has a heavy thatched roof, and is amply ventilated. In this room autumn-ripening Apples have been kept for two months after the same sorts gathered 100 miles further north, and which had been stored in ill constructed, dry rooms, had decayed, and this in spite of the fact that the fruit in the first-named house ripened a fortnight sooner. The chief need of a fruit room is a cool temperature that does not fluctuate, this enabling late sorts to retain their weight. So long as actual freezing does not take place the fruit will take no harm, and it is always better to cover with a slight layer of dry Bracken, hay, or Oat straw in case of sharp weather than to subject the fruit to fire heat. All the same, every fruit room should be furnished with a stove for use in such winters as that of 1894. I have always laid sheets of coarse brown paper over the shelves on which to lay tender-skinned sorts, but thick-skinned, firm, long-keeping Apples are best laid, not too thickly, on bare shelves, which ought to be latticed, so that a free current of air may pass through the fruit.—EAST ANGLIAN.

NOTES AND QUESTIONS.—FRUIT.

Apple Court pendu Plat.—This excellent midwinter Apple has so far been a failure on my heavy soil, and I think it is probably due to the stock. I was assured it was on the Crab, but of this I was doubtful when planting the standards, and the behaviour of the trees favours the idea. On a light soil it did well with me, and though not one of the most vigorous growers, was always healthy and clean-looking. It is one of the best of dessert kinds now in season.—H.

Pear Marie Louise is the finest-flavoured Pear in cultivation. Several trees should be grown in every collection, and in different positions in order to ensure a crop. It succeeds well in standard and bush form in warm districts, but in colder ones it should always be grown against a wall having either a south, south-west or western aspect. As cordons on the Quince the trees are exceedingly prolific, but the largest and highest-flavoured fruits are obtained from double-grafted trees on the Quince and trained either fan-shaped or diagonally. The crop should never be gathered all at one time, but at intervals of a week, when a much longer succession is ensured.—S. E.

Pear Beurre de Jonghe.—This is a medium-sized but first-class Pear, ripening about the end of December or the early part of January. Its merits are so good that it is deserving of a position on a south or west wall. When better known it will, in my opinion, be more largely cultivated. As a cordon on the Quince stock it is very prolific and grows vigorously. The fruits have greenish yellow skins, with brown russet spread more or less all over the surface, and are regularly formed. The flesh is white, most agreeably flavoured. This Pear will remain in good condition for some time after arriving at maturity. It should be in every collection where the shelter of a wall can be afforded it.—A. W.

Pear Baurre Hardy.—This is essentially a November Pear, and a good one too. Its appearance is rather uncommon, especially in a season when an abundance of sunshine is experienced. The side of the fruit exposed to the sun then assumes a deep bronzy reddish tint, and this contrasted with the greenish yellow colour of the remainder renders well.

grown samples very handsome. The fruits grow to a large size, particularly on a wall-trained cordon. Fine examples can also be had from pyramids on the Pear stock; in fact, it succeeds so well in the warmer districts grown in this way that it is almost unnecessary to give it the protection of a wall. It is a very heavy cropper, and is a vigorous and hardy grower. If buried in quite dry sand and kept in a cool place, fruit may be had quite a fortnight later than the usual time of ripening.—A. W.

CHRYSANTHEMUMS.

CODDLING CHRYSANTHEMUMS.

THERE is a deal of truth in the concluding words of "Suffolk" at page 457 under the above heading, and unless for exhibition, as pointed out, there is no gain in all this extra early propagation. Even where the plants are grown entirely for home use—and good flowers are a necessity—there is no real need in beginning their propagation in November or even December. One has but to put the matter intelligently to the test to find out what really serviceable blooms can be had even from April and early May-struck cuttings; indeed, some of the best blooms of that still fine yellow *Jardin des Plantes* I have seen were grown from cuttings inserted early in May in a manure frame containing Cucumbers. Anxious to secure dwarf plants and as leafy as possible, I selected some strong cuttings and dibbled them into sand in the frame mentioned. They were not long in rooting, and so well did the roots take to the leaves and manure of which the hotbed was composed, that I put the young plants at once into 5-inch pots, which were speedily occupied with vigorous roots. Not long after the plants were in their final pots—8-inch, I believe. I grew about a score of this kind in this way, and the blooms were a surprise to all who saw them. Most of the plants carried three, and one or two four, blooms. I do not say these were exhibition blooms, though I have seen much smaller on boards set up for that purpose, while in colour they were splendid of the kind, and in not a few instances superseded those from plants much older. This is twenty years or more since, and to-day we have dozens infinitely better suited to late propagation than the above kind. But with late propagation there must not be the fatal mistake of late stopping also, or the blind shoots will be more apparent than blooms. I am not greatly in favour of much stopping for the production of so-called bush plants, and consider that a few more plants with less pinching would give much better results and a far greater number of useful blooms to the grower. That well-known kind *W. H. Lincoln* is splendidly adapted for free-flowering, and plants in 8 inch pots I have had carry from forty to four dozen capital blooms without being stopped at all. These plants were grown thus some five years ago. My stock plant then was a solitary one, and not a good one at that, as it produced but five very small and weak cuttings. These were secured in two lots, and, fortunately, all rooted, but made little attempt to grow; so much so, that they were shifted bodily into larger pots more with the thought of securing stock than aught else. Presently, however, a start was made, and the plants were not interfered with beyond good culture, no pinching or stopping being done. Early in the autumn the plants began to develop wonderfully, and being only in 8-inch pots required every attention. Finally, they reached about 3 feet 6 inches across, and bore the flowers above stated. I am strongly of opinion that some sorts resent

much stopping of the shoots, and in such kinds as *Lincoln*, *L. Canning*, *Lady Lawrence*, *Golden Dart*, and others it can certainly be overdone. That useful white, *Petite Amie*, is always good for a dozen flowers on terminals without stopping at all, flowers, too, that no gardener who had them at command would despise. I believe, too, that the freest flowering kinds are those that most quickly fall into disuse, simply because they resent the one-to-three-on-a-plant system. Both *Mrs. Fogg* and *Golden Dart* are far from good, with a few blooms, the latter simply wretched, but with a dozen on the terminals it is one of the most graceful I know. E. J.

CHRYSANTHEMUM SPORTS.

MANY choice new varieties have been obtained by sports. Notable instances will be found in *G. J. Warren* and *Mrs. Mease*, from that queen among *Chrysanthemums*, *Mme. Carnot*; also *Charles Davis* and *Lady Hanham*, from another kind scarcely less beautiful, *Vivian Morel*. In these cases the new colours are rich, and in other respects the sports have qualities to make them as popular as the parents. But this is not always so, and not a few of recently-introduced varieties obtained by that means are anything but improvements on their respective types. *Mrs. J. W. Barks*, from that fine yellow, *Edith Tabor*, is dull in its bronzy shades and has the appearance of the parent in decay. *Pride of Stokell* seems a long time in getting the vigour of *Pride of Madford* with me, and I fear the new-comer will never be so highly esteemed as is the parent. *Eastman Belle* is a deep-coloured sport from *President Borel*, a variety now discarded. *J. E. Clayton* is a yellow *Eva Knowles*. The type is valuable because of its distinct amber tint; therefore, a yellow is not worth growing, because we have others of the shade better in bloom and of shorter growth. *Lord Aldenham* is a yellow sport from *E. Molyneux*, notable for its rich combination of crimson and gold; otherwise it is now considered uncertain. A yellow, therefore, from such a kind cannot be recommended. *Mr. A. Barrett* is a variety obtained by the sportive habit of a popular but by no means handsome exhibition *Chrysanthemum*, *Mrs. C. Harman-Payne*. The new kind has rose and buff tints, instead of the pink seen in the type. *M. Louis Remy* is a yellow sport from the same parent variety. This is a fairly good one, as it seems less coarse than the type and yet of great size. *Mr. R. T. Simpson* is a rosy bronze shade of *Julia Scaramanga*, which is late flowering and rather uncertain, and, apart from a nice shade of bronzy buff, there is little in it that is especially attractive. *Rivers H. Langton* is a very light yellow sport from *Mrs. W. H. Lees*. The type is a fine show flower, but the plant is tall and ungainly and withal uncertain. A really excellent variety is *Mme. Von André*. This is a primrose-yellow sport from *Mutual Friend*, a variety rightly esteemed for its size and charming formation of its florets. Perhaps this is the only one among recent sports one would add to the choicest selection of *Chrysanthemums*. *Mrs. Alfred Tate*, a rosy yellow form of *Etoile de Lyon*, is good in its way, but so few manage to grow the type presentable for show that I fear the same difficulties will present themselves with the newer form, although both may be excellent for the supply of cut blooms in quantity late in the year. The last I noted was a light yellow variety from *Western King*, which, like its parent, will be useful as a late-flowering sort for market.—SPECIALIST.

—Most of the new sports this season strike me as being rather poor and but little or no advance on the parent forms. The best are undoubtedly *Mme. Von André*, the pale sulphur sport from *Mutual Friend*; *Mrs. Tate*, a deep, warm golden terra-cotta sport from our old and long-standing show variety *Etoile de Lyon*; *Mr. A. Barrett*, rosy-buff sport from *Mrs. C. Harman-Payne*, and *J. E. Clayton*, a yellow

sport from *Eva Knowles*. There is also a yellow sport from *M. Chenon de Leché*, and *Eastman Belle* is a crimson and gold sport from *President Borel*. *M. Louis Remy* is a yellow sport from the white *Mme. Louis Remy*. There are also one or two sports from the old *La Triomphante*, but these have only been useful as bush plants. In the same way *White Quintus*, which sported from a medium sized pinkish Japanese *O. J. Quintus*, may also be useful.—C. H. P.

Chrysanthemum R. Hooper Pearson.—For decoration this has an undoubted future before it, the habit of its growth and magnificent colour of the blooms to my mind making it one of the finest introductions of recent years. It has been, and still is, praised as an exhibition flower by some, while others say it is too small. Its qualities, however, are such, that even if it suffers from lack of size for exhibition specimen blooms, it will claim a foremost position as a decorative plant and become a prominent market variety. The plant has an erect growth, dwarf and self-supporting, and the blooms, deep yellow with a suffusion of orange, are very effective. Being new, its present cost will prevent it becoming universally grown as a decorative kind during the coming year. At the late *Frome Chrysanthemum* show one specimen plant of this received a greater share of attention than any other individual exhibit, and therefore, it may be said, many others of exceptional merit.—W. S.

Chrysanthemum C. W. Richardson.—While a great many flowers were past their best at the mid-winter exhibition of the *National Chrysanthemum Society*, held at the Aquarium on December 5, 6, 7, this variety was represented by several beautiful blooms, and it was, I think, one of the most desirable varieties there exhibited. From the profusion of long, curling florets, this forms in most cases a beautifully-shaped bloom, while its rich golden-yellow colour gives it an immeasurable advantage over the many kinds with pale or washy tints. I have never noticed it so prominent as it was at the meeting referred to. This variety received a first-class certificate from the *National Chrysanthemum Society* on November 25, 1896, so that it is quite an old kind as *Chrysanthemums* go now-a-days. I have attended this mid-winter exhibition for several years, and I think the one just held contained more blooms that were past their best than I ever noticed before. It may be that one was more than usually critical, and the excessively mild weather and fogs had doubtless affected them, but, at the same time, the varieties were much the same as those exhibited a month previously, and the idea that this December exhibition would encourage the raising of later-flowering varieties has not apparently borne fruit.—T.

NOTES AND QUESTIONS.

Chrysanthemum Mrs. Langtry.—Single varieties are slowly making headway in popular estimation, and rightly so. The wonder is that it should not have been so long ago, because in them grace and refinement are both prominent features that ought to have been more freely recognised. *Mrs. Langtry* is by no means a new kind, but it is, all the same, as pretty as many newer ones. The flowers, small and Daisy-like in character, are borne on freely branching heads. For cutting or as a decorative plant in small pots *Mrs. Langtry* is particularly fitted. Its colour is white, which with age becomes tinted with pink, and in either state it is equally desirable.—W. S.

Chrysanthemum Miss Rose.—The exceptionally mild autumn has been an ideal season for outdoor *Chrysanthemums*, none of which among my outdoor collection has been more admired than *Miss Rose*. There was scarcely a comparison between these outdoor plants and those in pots under glass, the flowers of the latter being pale in colour and smaller. It is exceedingly free-flowering, and quite as remarkable for its dwarf habit, and both as a pot and border plant is a most desirable sort to grow—that is, to those who admire the single varieties. I have never before seen the flowers so fine or so large as on these border-grown plants. These, it may be said, were grown on a warm, sunny border.—W.

KITCHEN GARDEN.

MUSHROOMS ALL THE YEAR ROUND.

THE accompanying illustration shows rather less than one-third of the ridge-shaped beds contained in the Bromley Mushroom Farm, Kent, their total length being upwards of two miles. These beds are all in bearing, and new ones are being constantly made at the average rate of 20 yards per week. Mr. C. W. Gedney, the proprietor, is better known as an angling author and writer on natural history than as a gardener. He tells us that he first began Mushroom culture in the open by planting spawn along some headlands. This proved very successful, and when a large orchard at

soon—before the temperature has fallen below 80°—and then blame everyone except themselves. Given good spawn and the right temperature of beds, he finds it as easy to grow Mushrooms in the open all the year round as it is to grow Cabbages. With a good coating of nice clean stable litter, frost and snow will do no harm and the crops will grow in spite of them. Of course there is a great deal of difference in the results dependent upon good, bad, and indifferent spawn. Good spawn will keep a bed in bearing for twelve months, whilst poor spawn will not last as many weeks. In this Bromley orchard spawn-making goes on regularly every week all the year round, the result being that nothing but fresh bricks straight from the “hatching

Garden has returned nothing under 1s. per lb. since September 7. A good many have fetched 1s. 6d. per lb., but the average for the past three months would be 1s. 2d. in London. Manchester, Liverpool, and other big centres do not average quite such high prices, but these markets are not quite so particular about size and quality. Mr. Gedney sends his best to Covent Garden, and has got 1s. 6d. per lb. when field Mushrooms were selling retail in the shops at 3d. per lb. It is all a question of quality, and it is the greatest mistake in the world to grow anything but the best. Small and medium-sized “Mush” realise much better prices than large ones.

There are three grades known in the trade: “buttons, cups and broilers;” cups fetch the



Winter Mushroom culture in the open air. From a photograph by Geo. Champion in Mr. Gedney's garden at Bromley, Kent.

Bromley came into his possession he there started growing Mushrooms on ridges on a very small scale for his own household. The orchard was choked up with old and much-neglected Currant and Gooseberry bushes, and as these were grubbed up their places were taken by Mushroom beds. There were some early disappointments, the result of the first year's working showing a balance on the wrong side. But there were the assets of beds in bearing and others yet to bear, besides the value of exhausted manure. It is as well to thus make it clear that in Mushroom growing on a large scale the beginner must be able to await results. The failures of most amateurs, according to Mr. Gedney, arise through their being in too great a hurry. They spawn their beds too

house” are used. Bricks that are stored and dried will assuredly perish in the drying if the mycelium has been over-developed in the “hatching house.” This is where the amateur suffers, because such spoilt bricks will appear to him to be full of spawn. So they are, but the spawn is dead. Mushroom-growing and spawn-making are very fascinating occupations, especially when one can get say 10 cwt. per week at this time of year.

What about prices? He admits that they have been good this autumn, but they were bad all through the summer, when he found it better for some weeks to make ketchup instead of sending to market. What would be the average price this autumn? His ledger showed that his principal London salesman in Covent

most money. How long does it take from the planting of the spawn to the cutting of the first Mushrooms? That is one of the glorious uncertainties of the business. Mr. Gedney has had them in a month from spawn straight from the “hatching house,” and has, with dry spawn, waited six months before they put in an appearance. A fair crop per yard run for Mushrooms grown in the open, according to Mr. Gedney's plan, he puts at 20 lbs. The large specimens are worthless for market, and only go into the ketchup tub. He used to grow a good many weighing from 1 lb. to 1½ lb. until he made his own spawn, and thus developed a strain that produced Mushrooms of the size and quality which command top prices. We import an immense quantity of French Mush-

rooms to this country grown in the catacombs of Paris, but they are wretched, dry things, utterly lacking in the fleshy and juicy qualities of our English outdoor garden Mushrooms. He gets a few indoor Mushrooms in the "hatching houses," where he develops the spawn, but there is no comparison between these tasteless, spongy Mushrooms and those grown in the open. The coddling of Mushrooms in stifling sheds and heated houses is an utter mistake. Mr. Gedney has gathered them in the open when he had to turn the snow-coated litter off the beds in order to get at the crop.

VISITOR.

Stachys tuberifera.—How little is now heard of this nice little tuberous-rooted plant. Does it arise from prejudice on the part of the gardener, or dislike on the part of his employer or on that of the cook? Most certainly the little tubers when properly grown, cleansed, and cooked are very nice. Even Salsafy, called in France the Vegetable Oyster, is here a vegetable that is tolerated in the garden, but seldom asked for in the kitchen. We ought to as heartily welcome the tubers of *Stachys tuberifera* as we should the pods of the delicious Butter Bean, and should doubtless do so did we only have them properly sent to table.—A. D.

Potato Carter's Snowball.—Having grown this Potato for several seasons, I was pleased to see the note in its favour from "J. C. T." This season it has been the heaviest cropper amongst half a dozen maincrop varieties, turning out a heavy weight of fine well-shaped Potatoes in spite of the dry season. It should be said of Snowball, however, that it is a tall grower, and on this account it is perhaps more suitable for the field than for the garden. With me this season it has grown taller than Up-to-date, and though I was inclined to regret this at the time, I was more than satisfied when the roots were lifted. Another point in favour of Snowball is its excellent quality, and in this respect it differs from some other vigorous-growing kinds.—H. H.

Early stump-rooted Carrots.—The excellence of Early Gem Carrot was recently noted, and, having grown it myself, I can corroborate what the writer says in its favour. For many years I made a speciality of early vegetables, Carrots included, and forced early in the new year in frames raised on gentle hotbeds. I grew Early Gem as soon as it was sent out, sowing it early in February alongside of that good, richly-coloured Carrot, Nantes Horn. If I remember rightly, Nantes Horn was ready for drawing some ten days or a fortnight before Early Gem, this forming a good succession. A few years after, however, Market Favourite was introduced, and one trial convinced me of its superiority. For years I grew it, usually drawing bright, tender roots with little core and of excellent flavour slightly in advance of Nantes.—J. C.

Long versus short Carrots.—Many gardeners pride themselves on the length and perfection of their winter stock of Carrots, and in good Carrot ground this may afford some satisfaction, but I have come to regard these long roots with much less favour than in the past. In the long tapering root there is a deal of waste in the course of preparation for cooking compared with the shorter stump-rooted kinds, of which there are a good many. This season I sowed some of both sections for winter use, and in extent of yield, labour of lifting and storing, and their utility, I find the stump-rooted sorts the better. The labour of lifting the long-rooted Carrots is considerable when a large extent of ground has to be dug, and so is the covering up of the roots when they are laid in outdoors, as I prefer to do. They do not keep well in "pits" indoors unless they can be covered up with sand or other non-conducting material; they shrivel before the winter is over, and in this state they give rise to complaint from the kitchen. Laid in the open ground in layers

and protected with leaves and litter when severe weather threatens, they keep sound and plump, and may be drawn upon as required for use. The Early Nantes turned out a remarkable yield of heavy roots, clean, shapely and bright. Veitch's Model also is a fine winter Carrot, and these and others of the same section will replace the long ones with me in future.—W. S.

Parsnips.—These roots invariably winter best if left in the ground where grown, because they then keep so much more plump and juicy. But their chief trouble when hard weather prevails is discoloration and injury to the shoulders, which are often much exposed to the atmosphere. If alternate rows in a bed or breadth be lifted, some soil can be ridged over those rows left in the ground, and thus the shoulders are well protected. The lifted roots can either be laid in thickly into sand and be stored in a shed or cool cellar, or, and I think best, be laid in thickly into the ground beneath overhanging trees, as with a few leaves strewn over them in such case no harm from frost results, and the roots are invariably more restful and keep fresher. Parsnips seem to be very good this year, but this remark applies chiefly to those field-grown, and not to those long, leggy roots sometimes 30 inches in length that are frequently grown in gardens. These are not nearly so nice when cooked as are harder-grown roots.—A. D.

Is the Tomato a fruit or vegetable?—Whether the Tomato should be correctly termed a fruit or vegetable is a matter of opinion amongst growers. I have taken some interest in the notes which have recently appeared from gardeners, and notice that opinions are very much divided. Some consider the Tomato a fruit, others contend that it is a vegetable; another says it is a fruit, but not a dessert fruit; and again it is given as an opinion that it is a fruit, but usually classed as a vegetable. One grower says it should be classed with that which it is grown and used for, and in reading one note after another no really definite result on this vexed question can be arrived at. It seems to be generally allowed that, speaking from an exhibition point of view, the Tomato is out of place amongst the fruit, its proper place being amongst the vegetables. This, coupled with the fact that the Tomato is rarely placed on the dessert table, seems to suggest that its proper place is amongst the vegetables.—H. H.

NOTES AND QUESTIONS.—KITCHEN.

Tomato Stirling Castle.—I do not think any Tomato superior for general purposes, both indoors and out, to Stirling Castle. I agree with "Grower's" remarks on the above variety (p. 452). I have grown it very largely both inside and out this year with good results. It is of medium size and an excellent setter. I have tried a goodly number of varieties here, and I hope next year to confine myself to the following varieties: Earliest of All, Stirling Castle, Ham Green Favourite, Conference, and Challenger. I consider the Tomato a vegetable.—S. KNOWLES, Pylewell Park Gardens, Lympington.

Tomato Royal Chester.—I notice that in the "Notes on Tomatoes" which have appeared in THE GARDEN recently, a considerable number of varieties are recommended, though, so far as I have observed, only one reference is made to the variety named above. Mr. E. Gilman speaks well of Royal Chester, and he has every reason for so doing, considering how well he grows it at Alton Towers. When visiting these gardens some time ago I was struck with the excellence of a house of plants of this variety, which is a heavy cropper and produces large, well shaped and extremely fleshy fruits. The variety is a free setter and the fruits contain very few seeds. The notes which have appeared in THE GARDEN also give an idea of the great variety there now is amongst Tomatoes.—G. H. H.

Frost in cold frames.—In the south we are now experiencing the sharpest pinch of weather we have had for several seasons, and the protection of plants in cold frames has become a ne-

cessity. It sometimes happens at these times that the protective material is not sufficient, and the frost penetrates into the interior of the frame. If the next day happens to be sunny and the desire to give the plants the benefit of it by removing the covering is carried out, the result will probably be disastrous and frozen leaves will at once become limp and lifeless. Before removing the covering from frames after a sharp frost it should first be ascertained whether it has caught any of the plants, and if so, light should be excluded by not removing the covering material. By keeping the frames covered till the frost has departed there is not nearly so much fear of plants being permanently damaged as if exposed to light and sunshine while the foliage is in a frozen state.—H. H.

STOVE AND GREENHOUSE.

THE PHILODENDRON IN FRUIT.

The accompanying illustration is from a photo taken at the doorway of a small tropical house, 40 feet by 20 feet, in the garden of Mr. Thos. Fletcher, Grappenhall, Cheshire. Although every plant is grown in a separate pot to admit of thorough cleanliness and prevent the harbouring of vermin, the pots are conspicuous by their absence from view; in fact, the whole arrangement is an attempt at the reproduction of a tropical jungle on a small scale. The collection is a very mixed one, and includes Pitcher Plants, fruiting Bananas and Pines, some rare Caladiums, Crotons, &c. Perhaps the most uncommon plant is the Philodendron in fruit seen at the top left-hand corner. This is growing in an 8-inch pot some 30 feet away, but this is assisted by the rope-like roots thrown down from the top of the house. This plant has ripened four to six fruits each year for the past five years. It is now carrying two bunches of seven fruits each, which appears to be a very unusual crop.

Croton Eugenie Chantrier.—Among the brightly coloured Crotons this variety is just now very conspicuous, supplying as it does a shade not much represented among them. It is one of those forms with moderately broad foliage, the leaves being each about a foot or 14 inches long and 3 inches wide. The ground colour is a rich olive-green heavily veined and in some instances almost entirely suffused with bright orange-red, a tint that is particularly effective during the dull winter days. It has not the extreme grace and elegance of the narrow-leaved forms, but as a brightly coloured plant for the stove it merits high rank.—H. P.

Brightness in the winter.—Nothing is more acceptable during the dull days of winter, when flowers generally are scarce, than the bright scarlet bracts of *Poinsettia pulcherrima*, and where much decoration has to be done they are practically indispensable. Under artificial light they are very effective, and in conjunction with spikes of Roman Hyacinths make very pleasing decorations. Dwarf plants in small pots raised from cuttings in the summer are most useful for table decoration. The best plants of *Poinsettias* are those which are kept during the growing season in a cool temperature. *Poinsettias* are often grown in a stove temperature, and though under these conditions the bracts may possibly be obtained a little larger, the plants are invariably tall and lanky, disposed to lose their lower leaves and not nearly so lasting for decoration as if they had been grown under cooler conditions.—H. H.

Lily of the Valley in flower.—At one time it was considered a good test of a person's skill in handling Lilies of the Valley to have an ample supply for Christmas, but now, owing to the practice of retarding the crowns beyond the normal period of flowering by keeping them in a

freezing chamber, they may be had in bloom at almost any time of the year. Thus the quantities of fine flowers that one sees in the florists' shops during the autumn are the product of crowns that would naturally have flowered in the spring of the year. The same applies to most of the blooms that are met with at Christmas-time, for the forcing of such crowns is an easy matter, all that is needed being to place them under conditions favourable to growth. They then quickly push up both leaves and flower-spikes. Before this practice was in vogue the earliest ripened Berlin crowns were obtained and potted as soon as possible, which in a general way would be by the middle of November at the latest. Then they were plunged in bottom-heat in a close propagating case, and generally commenced to quickly grow in a more or less regular manner. Sometimes, however, the first batch absolutely refused to start, in which case they were taken out and

the habit and general appearance of *B. Lynchiana*, but is not so liable to run up tall and naked, the intercrossing of *B. semperflorens* having influenced it in this respect. Another variety known as *gigantea carminata* is much in the same way. If struck in the spring and the plants are grown on cool (and sturdy during the summer they form effective bushy plants in pots 5 inches and 6 inches in diameter by the autumn, and in a warm greenhouse with a little care they will maintain a succession of bloom for months. Older plants may be grown into large specimens if desired, but generally speaking the smaller ones are the more useful.—T.

Repotting Cyclamens.—Reference was recently made to potting Cyclamens, but I think comparatively few are put into their blooming pots at such a late period of the year. I presume the batch spoken of was the produce of seed sown in autumn, 1898, as the majority of cultivators

desirable dark colour. For feeding, nothing, so far as my experience goes, equals ordinary farm-yard liquid. The old plan of standing Cyclamens behind north walls is losing favour. The best position, I think, is in frames turned towards the north, but in an open, sunny position.—B. N.

HYBRIDS OF BEGONIA SOCOTRANA.

It falls to the lot of very few classes of plants to attract so much attention as did Messrs. Veitch's exhibit of the several varieties of hybrid Begonias obtained from *B. socotrana*, which formed such a prominent feature at the Drill Hall on November 21. Their great value for winter blooming was well exemplified, and collectively they were seen to much greater advantage than in the case of isolated examples. Again, that such a grand display was furnished by plants grown within the smoke-laden London area is another great point in their favour, as plant culture within half a dozen miles of Charing Cross becomes more difficult year by year. With these Begonias and the Javanese *Rhododendrons*, two groups of plants that may be almost said to have been created at Chelsea, a grand yet uncommon midwinter display could be formed, as the same temperature is suitable for both. When *B. socotrana* was first introduced it was confidently anticipated as likely to be of great service to the hybridist, and this has proved to be the case, though we had to wait a little while for the first of its progeny. This was

John Heal, which was obtained by fertilising the flowers of *B. socotrana* with pollen from a crimson-flowered tuberous-rooted variety known as *Viscountess Doneraile*. Only one seed germinated, which flowered in 1885, and was named John Heal. It was awarded a first-class certificate by the Royal Horticultural Society. This variety was distributed in 1888, all the plants having been propagated by cuttings from the original specimen. It forms a freely-branched plant, with oblique foliage, instead of the peltate leaves of *B. socotrana*, while the flowers, which are borne on loose gracefully disposed peduncles, are single and of a rich rosy carmine colour.

Adonis, distributed in the same year as the preceding, originated from an orange-scarlet tuberous-rooted variety of the summer-flowering Andean section, which was fertilised by pollen from *B. John Heal*. This is a vigorous-growing, freely-branched plant with deep rose-coloured blossoms, which are in some examples as much as 3 inches

in diameter.

Winter Gem, of which a coloured plate was given in vol. xxxix. of *THE GARDEN*, was obtained by fertilising *B. socotrana* with pollen from a crimson-flowered member of the Andean race. In *Winter Gem* the single flowers are of a rich crimson-scarlet colour, while the habit of the plant is dwarf and compact. This was distributed in 1891, and was popular for a time, but has since then become comparatively scarce, and is not now included in Messrs. Veitch's catalogue. In 1897 three charming varieties were distributed from the same source, viz.,

Ensign, in general appearance nearly resembling the summer-flowering tuberous race, with semi-double rosette like blossoms of a rich rose-pink colour.

Myra is altogether of looser growth, and readily lends itself to culture in suspended



View in the conservatory at Grappenhall, showing *Philodendron* in fruit. From a photograph sent by Mr. T. Fletcher.

another lot potted in their place. When the flower-spikes commenced to push up they were still retained in the propagating case, as the humid atmosphere was favourable to growth. As the flowers opened more air was given to prevent damping. The retarded crowns are now as a rule brought on in a close, moist atmosphere.—H. P.

Begonia semperflorens gigantea rosea.—Since this Begonia was first sent out (now some fifteen or sixteen years ago) we have had many other kinds put into commerce, but for general purposes this still holds its own as one of the very best, and for greenhouse decoration during the winter and spring months it is invaluable. This variety is one of the innumerable hybrids that we owe to M. Lemoine, of Nancy, who announced it as a cross between *B. Lynchiana* (Roezli) and *B. semperflorens*. It is in every way a better garden plant than either, having more

who sow say in February find a 4½-inch pot sufficiently large for flowering the plants successfully in, judicious feeding being of course resorted to. My practice for years was to sow the seed in August or early in September, and to keep the seedlings in the pans until the following March, or, in the case of forward batches—the result of a mild winter—February; then pot off and grow in an intermediate house till May. An ordinary greenhouse, light in character, then received them, from which they were removed to cold frames in June. As a rule I used to flower these autumn-sown plants in 4½-inch pots. The chief thing is to get a potful of healthy roots, yet to avoid a pot-bound state. Cyclamens are soon upset, and I think that sudden withering of the leaves is often due to the injudicious use of manures. When in full growth a little weak scot water in a clear state, given say twice weekly, will aid in imparting to the foliage the

baskets. The flowers are carmine-rose and borne on long arching peduncles.

Mrs. Heal, a superb variety, bearing a great profusion of rose-carmine blossoms tinged scarlet. The flowers are over 3 inches in diameter.

Winter Cheer, which stood out very conspicuously among the varieties shown on November 21, is of more recent date, and was only distributed in the spring of the present year, though it received an award of merit in the winter of 1897. This is of short, sturdy growth, with foliage a good deal in the way of *B. socotrana*. The flowers, which are produced in small clusters well above the leaves, are over 3 inches in diameter, semi double, and of a carmine-scarlet tint. The latest addition to this section,

Sylvia, received an award of merit on the occasion referred to, so, judging by the others, it will be a year or two before it is distributed. It is of rather erect habit, particularly free-flowering, and the blossoms, though rose or carmine-rose, are tinged with salmon.

These varieties are, I think, destined to form the nucleus of a race which we may expect in time to be almost as universally grown for flowering in the winter as tuberous *Begonias* are for summer blooming. A prominent feature of these *socotrana* hybrids is the length of time the flowers remain fresh and bright, but this is doubtless to a certain extent owing to the fact that they expand during this dull period of the year.

The culture of these *Begonias* differs principally from the ordinary tuberous-rooted section in the time of the year at which they grow and bloom. Thus they go to rest after flowering, but must not be too much parched up at that period. Then towards the end of the summer they must be shaken clear of the old soil and repotted in light, open compost, such as members of the tuberous section delight in. The temperature of a warm greenhouse, that is, a maximum of 60° to 65°, will suit them well during the autumn and winter.

The varieties above enumerated by no means exhaust the list of desirable kinds for which we are indebted to *B. socotrana*, and of them, the first place must be assigned to M. Lemoine's *Gloire de Lorraine*, which for the last three or four years has been certainly grown more than any other *Begonia*. This, which was first distributed in the spring of 1893, has given rise to valuable sports, viz., *Caledonia*, a pure white counterpart of the type, and Mrs. Leopold de Rothschild, which is more compact and with flowers of a more decided pink than the ordinary form.—T.

The excellent varieties of new winter-flowering *Begonias* that have been evolved from the well-known *Begonia socotrana* crossed with the tuberous *Begonia* are not merely novelties of themselves; they mark the advent of a new race of these plants, the end of which it is not possible to surmise. In view, however, of the remarkable strides made during recent years with the tuberous-rooted section, it is quite possible that great and rapid improvements will result in the present new class. Even now the kinds that have already made their appearance are possessed of much merit—at least, in so far as showiness and freedom of flowering are concerned. The kind called *Winter Cheer*, for example, is all that could be desired in a plant in a 5-inch pot. Such habit as this possesses is exactly suited to cultivation under glass, and even if the flowers do not become larger than those of present-day sorts, there is ample in the new-comers to appreciate and to admire. Of course, the flowers will of a surety increase in size. All the same, we may yet express the hope that no attempt will be made to secure blossoms of dinner-plate proportions to rob the present types of the pleasing grace and beauty they now possess. Freedom of flowering should ever be an important item, and how

pleasing a result may be secured by quite small blossoms we need go no further than the well-known *Gloire de Lorraine*. Mention of this recalls the fact that John Heal, one of the new winter-flowering kinds, is possessed of a habit of growth (not of blossom) that reminds one of the plant named. This, it appeared to me, would make a very fine kind, for freedom of flowering was a chief point with it and its small leafage pleasing and distinct. *Ensign* is another very effective kind, erect in growth, the foliage ample and good, and flowers abundant. No less good is the newer kind called *Sylvia*. This, while possessing much the same habit of growth as the two named, except that it is slightly dwarfer, is of quite a novel shade of colour, a sort of salmon-rose largely predominating. Another called *Mrs. Heal* has scarlet flowers, and these are also larger. One of the earliest of the race is *Myra*, in which a loose and straggling habit prevails. This may have its uses all the same, and for baskets or brackets and the like will be esteemed. As pot plants those previously mentioned appear the best. All the same, it is well to see the earliest as also the most recent kinds side by side, if only to secure a correct idea of the progress made. The progress, too, is evident, and the Messrs. Veitch and Sons merit all praise for thus providing beautiful and free-flowering plants for winter work, and, above all, plants that are apparently of easy culture and likely to succeed in the fog-laden atmosphere of our large towns.—E. J.

POINSETTIAS.

THESE are among the brightest subjects we have for decoration at the present time. The only drawback is, they will not stand exposure to the cold, more especially when used as pot plants. This fault may be remedied to some extent by gradually reducing the temperature. They will then stand well if the thermometer does not fall much below 40°. When cut I find the flowers last much better if the ends are dipped in hot water as soon as cut, this preventing bleeding and sending the sap up to the bracts. I have had them last in good condition for fully three weeks, and I believe I might say a month; while on the other hand I have seen them droop the same day as cut when the sap has been allowed to run down, and sufficient care has not been taken in regard to exposing them to a sudden change.

There are several distinct varieties, the result of raising seedlings. Of the red varieties, I do not know of any that have been distinguished by names except one called *carminata* and the double form, *pulcherrima plenissima*. The variety shown at a recent meeting of the Royal Horticultural Society by Messrs. Cripps and Sons is one of the best forms I have seen, though not quite such a brilliant scarlet as some. The white variety is worth mentioning. It is more difficult to manage than the red, but when well done it makes good heads of bracts and forms a nice contrast to the bright colours.

In the culture of *Poinsettias* these grown for cutting may be propagated early, say in May, and though they may run up tall, if potted on and treated liberally they make much larger heads of bracts. For dwarf plants strong cuttings put in early in August will make the best plants. The most important point is to get strong cuttings. The tops may be taken from those propagated earlier, but as the stem is hollow between the joints, care must be taken that they are cut off quite close below a joint, one leaf may be removed, and the cutting put in just deep enough to keep it firm. If done carefully and put into the close pit before they get withered, they will start away without losing a leaf. One of the greatest difficulties is to keep good foliage, but if these late-struck cuttings are carefully attended to they will retain their leaves and make dwarf plants. They should be grown in a moderate stove temperature and kept up as close to the glass as possible, and no shading should be given. As soon as the bracts begin to

form more heat may be allowed. The early plants may be grown in a cold frame during the summer and will do well, but if left out when the nights begin to get cold, though they may not appear to take any harm, the leaves are sure to fall off soon after the plants are placed in heat. H.

IUCULIA GRATISSIMA.

THIS fine greenhouse plant, when it is grown at all, is usually grown as a climber, or at least attached to a wall. Why it is so treated it is difficult to say, for it is very fine when grown as a bush, flowering much more freely than when given a large root-run such as is usually afforded wall plants. I recently noted some nice little bushes about 3 feet high covered with the clusters of rosy flowers, and thought them wonderfully pretty. It is much easier, too, to keep such plants free from insects than others growing on walls and trellises, where it is often difficult to get all round them with the syringe. A little closer pruning, of course, is necessary than when growing on a wall, and the best time to carry this out is the present, or, rather, as soon as the flowers are past. Let the roots get fairly on the dry side before cutting back, and it will be found that little more root-moisture will be required until the plants are again started. Some growers try to strike the prunings, but personally I have never succeeded in doing so. This *Iuculia*, like a number of other hard-wooded plants, requires to be drawn out a little, as it is termed, before the growth is fit for making into cuttings. For instance, just before the plants begin to grow naturally, place them in rather warmer and moister quarters and ply the syringe about the heads. This will cause them to break freely, and when the shoots are about 3 inches in length the tops may be taken off for cuttings. In order to avoid their shrivelling before being inserted the cutting-pots may with advantage be taken to the propagating case, especially if the potting-shed is draughty. Water them thoroughly at once and plunge in a medium bottom heat. If carefully tended and never allowed to flag, a fair percentage will be sure to root, but at the best it is rather a difficult subject. The old plants when they start may, if cuttings are not needed, be grown straight away, the shoots thinned a little if necessary, and any extra strong ones may be pinched out; this is not often needed. A warm and moist greenhouse temperature with ample light suits it best, and the compost should be lasting, free, and open rather than rich. Equal parts of peat of good quality, loam, and leaf-mould, with plenty of sand and a few lumps of charcoal or crocks, will suit it well. The young plants mentioned above may be grown on in a good light with the older ones, and by occasionally pinching to divert the sap and cutting a growth out here and there to keep them thin, they will soon make flowering plants.

Ardisia primulaefolia.—This is a very pretty and distinct species of *Ardisia* whose most prominent feature, like the commonly-grown kinds, is furnished by the brightly-coloured berries. It forms a sturdy stem little more than an inch high, while the corrugated leaves, which are disposed in a horizontal manner, are each about 6 inches long and of a deep green tint. The entire plant thus forms a flattened whorl of leaves a foot or a little more in diameter. The bright red berries, about the size of peas, are borne in closely-packed rounded clusters from twelve to twenty in a cluster on stems about a couple of inches long, so that the entire plant seldom exceeds a height of 3 inches. As the bunches of berries are slightly drooping, they are not seen to quite so good advantage as if they were more upright. For all this, *A. primulaefolia* is decidedly attractive, and as an edging to a group of plants it presents a pretty and uncommon feature. From a fine-foliaged point of view a second species—*A. mammillata*—at once arrests attention, the pale green ovate leaves being so thickly puckered all

over the surface that they present the appearance of being covered with small wart-like elevations, and as a whitish hair springs from the centre of each one, the entire leaf has quite a hoary appearance. The scarlet berries are very attractive, but are usually partially hidden by the ample foliage. By far the best-known member of the genus is *A. crenulata*, which was introduced from Mexico quite early in the present century. It may be treated either as a greenhouse or stove plant, the usual method being to grow it in the latter structure, as it makes more rapid progress therein; then, as the berries ripen, the plants are removed to the greenhouse, as in the lower temperature they remain fresh and bright for a longer period than would otherwise be the case, and they can then be used for the decoration of the dwelling-house. Apart from the berries, the dark shining green leaves of this *Ardisia* are very ornamental. The white-berried form of this, though distinct, is less showy than the type.—H. P.

ORCHIDS.

BASKET ORCHIDS.

A GREAT deal of the charm of Orchid flowers lies in their quaint and fantastic forms and the delicate, semi-transparent texture of their component parts. These are never so well shown off, so to speak, as when the plant bearing them is on a level with or above the line of vision, while pendulous species and varieties seem especially attractive. Most of these are grown in various contrivances that for convenience sake are all termed baskets. But not only are baskets useful from this point of view; there are certain plants that thrive well in this class of receptacle that are hardly strong-rooted enough for pot culture, yet prefer a little compost about them to bare blocks of various kinds. The freedom with which air enters by the spaces between the rods or wires, and the amount of light that reaches the leaves and stems of the plants are all points in favour of basket treatment, many plants difficult to grow in other ways thriving well in them. Another attribute of basket culture frequently lost sight of is its utility in bringing back to a state of health weak plants of a vigorous habit of growth. Many a choice bit of *Dendrobium*, *Vanda*, *Cattleya*, or *Leelia*, and even *Cypripedium* has been recovered from a state almost of collapse by being transplanted temporarily from a badly-drained mass of compost to the more healthy conditions mentioned above. I could give many instances of this if it were necessary, but would rather advise anyone who has unthrifty plants to try the experiment for himself, and will instead mention a few plants that are peculiarly adapted to basket culture.

No plants are more so than the *Dendrochilum* or *Platyclinis*, and few Orchids are more beautiful than a well-flowered specimen of *D. glumaceum* or *D. filiforme*. A grand subject is the former with its scores of racemes arching and depending in rich profusion from the bulbs that produced them, lasting long in beauty and filling the house with fragrance. A very open-meshed basket or rough compost is not necessary for these plants, as they are surface rooting in a way, and when growing need a large quantity of moisture. A pan with perforated sides nearly filled with drainage suits this class well. Quite a different style of plant is *Saccolabium giganteum*, now in flower in most collections. This and many allied plants in the *Vanda* and *Aerides* tribe like basket treatment. The compost should be rough, and it is hardly possible to have the rods too far apart, provided always that the basket is strong

and rigid. Again, we have *Masdevallias* of the *Chimera* group. Their quaint and singularly formed blossoms push out of the sides of the compost, and are often lost when the plants are grown in pots. In baskets they look best, and thrive in a compost in which *Sphagnum* plays a large part. The *Stanhopeas* and *Acinetas* are purely basket plants, and, owing to their peculiar habit of pushing their flower-spikes down into the compost, some rough lumps of charcoal or burnt clay should be introduced around the bottom and sides, or possibly many of the spikes will never see daylight. Some kinds, notably *S. eburnea*, are in the habit of pushing directly downwards; others, such as *S. tigrina*, are more apt to push laterally. So far I have not even mentioned the beautiful species of *Dendrobium* that are so suitable for this method of culture, or the sweetly-scented and pretty *Odontoglossum citrosmum*, which is useful for growing in no other way. To touch ever so lightly on a tithe of those suitable would take up far too much space.

There are one or two common sources of danger that have to be avoided. When hanging, as they are frequently allowed to, from eyes screwed or driven into the rafters, condensed moisture from the latter often runs down into the compost, or, worse still, into the hearts of the plants. In winter especially this water is very cold, and many fine plants have been ruined by it. If a brass rod is screwed to the rafters at right angles to them and running the length of the house, the baskets may be hung on this between the rafters, where they are out of danger. The baskets, too, where possible ought to be suspended over walks and paths. Where they overhang choice plants from compulsion, they should always be allowed to drip for an hour or two after dipping before being replaced. Dipping is much preferable to any other form of watering for baskets, as it is more thorough, it makes insects very uncomfortable, and drives out stagnant air from about the roots. H. R.

Oncidium Cavendishianum.—The colour of the blossoms of this fine winter-flowering species is very bright, clear, and telling, being a chrome-yellow with a hardly perceptible tinge of green that serves really to brighten rather than otherwise. It is such an excellent grower, that all should include it in their collections. Having no pseudo-bulbs, it does not require any distinct dry resting period, yet after the spikes are past until the growth again commences a great amount of moisture is required. For temperature the intermediate house suits it well, and the compost must be very rough and contain a good proportion of *Sphagnum* Moss. Ample moisture when growing, and consequently perfect drainage, are necessary.

Ada aurantiaca.—There are several brightly tinted Orchids now in flower, and though the individual blossoms of this species are small, in the mass they are very showy and as good as any in the colour. Quite a long succession of flower may be kept up by growing sufficient stock of it, as some plants are sure to be later than others. A native of New Grenada, the temperature of the *Odontoglossum* house will suit it well, but when healthy and vigorous the roots will thrive in larger pots and a rougher compost than most *Odontoglossums*. It is well suited, in fact, if treated like *O. grande* and similar kinds. Thrips are sometimes troublesome, and should be kept under by vaporising the house occasionally and sprinkling a little sulphur about the young growths.

Masdevallia amabilis.—Though one of the commonest, this is one of the prettiest of the showy flowered *Masdevallias* and a first-rate garden plant. The leaves and habit are the same as in *M. Harryana*, and the bright crimson and orange of the flowers are remarkably fine. In

spite of all that has been said against it, I still hold that autumn potting is safest for these showy flowered *Masdevallias*. It is not cold that harms them under cultivation, but too much heat. They come from some of the coolest regions that Orchids are found in, and it is difficult to keep them cool enough in an ordinary English summer. One never need fear the results of our winters, for as long as the house is kept at 45° or 50° the *Masdevallias* will take no harm. Besides, if taken in hand at the proper time, the plants are well established again before winter. During the summer it is wise to allow the *Sphagnum* Moss to grow somewhat freely about the surface of the compost, as it keeps the base of the stems cool and is a good index as to the condition of the compost as to moisture. Frequent fumigation is necessary in order to keep down yellow thrips.

NATURAL HYBRID ODONTOGLOSSUMS

THE next largest section to the *Cattleya* family among the Western section of natural hybrids are the *Odontoglossums*. These are about eighteen in number, and they form in many instances useful and desirable additions to our cool house Orchids.

Odontoglossum Adrianæ is one of the latest introductions. When first named it was said to have been raised by Messrs. Linden by crossing *O. crispum* and *O. Hunnewellianum*. It is quite intermediate between the parents named, the flowers white, densely spotted and margined with yellow on the sepals and petals, these in some of the forms being suffused with rose-pink. The lip is white, except the yellow disc, and covered with numerous small brown spots. This hybrid has since appeared in many importations of *Odontoglossums* in this country. Several of these have been exhibited at the Drill Hall meetings of the Royal Horticultural Society and will be found described in THE GARDEN reports of certificated plants. There can be no doubt as to its being a natural hybrid.

O. Andersonianum first appeared with Messrs. H. Low and Co. in 1867 or 1868. It is supposed to have been a cross between *O. odoratum* and *O. crispum*. It is difficult at times to distinguish it from some of the starry varieties of *O. crispum*, but in the majority of cases the separating lines are clearly defined. It is, therefore, to be regretted that Messrs. Veitch in their Orchid manual should have classed *O. Andersonianum* as a variety of *O. crispum*. *O. Ruckerianum* is not distinguishable from *O. Andersonianum*, and must therefore be classed only as a variety of that natural hybrid. The only difference the *Odontoglossum* experts now attempt to set up is the fact of the rose suffusion being found in *O. Ruckerianum* and not in *O. Andersonianum*.

O. aspersum is supposed to have been derived from *O. Rossi* and *O. maculatum*. It has the intermediate characters both in the flower and habit of growth. In the variety *O. a. violaceum* the flowers are suffused with deep rosy-violet. Both are distinct and desirable varieties.

O. Cookeanum is supposed to have its origin between *O. gloriosum* and *O. triumphans*. It certainly combines the intermediate characteristics of these species. It first flowered in the collection of Mr. Malcolm Cooke, and was exhibited by him on November 14, 1891. A second plant was exhibited by Messrs. H. Low and Co. on February 9 last.

O. Coradinei (*O. Lindleyanum* × *O. crispum*) has the intermediate characteristics so pronounced, that no doubt can exist as to its origin. It has extensive variations, the best forms being worthy of every consideration.

O. Denisoniæ is supposed by some authorities to be the original of the large class now known under the name of *O. Wilekanum*. It is supposed to be derived from the crossing of *O. luteo-purpureum* and *O. crispum*. I recently examined the only existing record of *O. Denisoniæ*, and to my mind it is not distinct from *O. crispum*, and is

totally different from the plant in cultivation as *O. Wilckeanum*.

O. elegans (*O. cirrhosum* × *O. Halli*) first appeared with Messrs. Veitch in 1871, Reichenbach describing it as "one of those quasi-meteoric rarities." It has the intermediate characters of the supposed parents and is a distinct variety. It has since appeared in different collections and may be found under several names.

O. excellens, the only natural hybrid up to the present that has had its parentage verified by artificial hybridisation, is derived, as was supposed, from the intercrossing of *O. Pescatorei* and *O. triumphans*. It first cropped up as an imported plant in Sir T. Lawrence's collection, and has since made its appearance on several occasions, generally along with *O. Pescatorei*. It was artificially raised by Mr. Seden. Mr. Thompson, of Stone, and others have since been successful in flowering home-raised hybrids.

O. Galeottianum (*O. Cervantesi* × *O. nebulosum*) first appeared among an importation of *O. Cervantesi* with Messrs. H. Low and Co. The flowers are white, with a few reddish brown bars at the base of the petals and some yellow streaks on the crest of the lip.

O. Horsmani (*O. Pescatorei* × *O. luteo-purpureum*) is a distinct and pretty hybrid, with sulphur-yellow and brown spotted flowers. It first flowered in Messrs. Wallace's nursery at Colchester in 1879.

O. Humeanum (*O. Rossi* × *O. cordatum*) has the distinct characteristics between these species. It is a distinct and desirable variety, worthy of every consideration. It first flowered in the collection of Mr. Burnley Hume, and was described by Reichenbach in 1876.

O. Schroederianum is a unique *Odontoglossum* in Baron Schröder's collection. It is supposed to have been derived from *O. Pescatorei* and *O. tripudians*, the flowers being white, with mauve blotches.

O. vexativum (*O. maculatum* × *O. nebulosum*) appeared in Lord Lonsborough's collection at Norbiton in 1876, but seems to be lost to cultivation.

O. Wilckeanum (*O. crispum* × *O. luteo-purpureum*).—This hybrid has been the cause of more controversy than all the others put together. It is a difficult matter to decide where *O. Wilckeanum* finishes and *O. crispum* begins. In fact, some growers suggest that all the so-called spotted forms of *O. crispum* are of hybrid origin. The distinguishing features of *O. Wilckeanum*, as known to us in gardens, are so marked, that little difficulty is found in identifying the plant. In very few of the species is so great a variety to be found as in *O. Wilckeanum*. Flowers are met with in different shades, from yellow and brown markings to white grounds with purple spots, and what is of still greater importance to the grower is the fact that with but few exceptions the varieties are worth growing.

O. Williamsianum (*O. grande* × *O. Schlieperianum*) has the brown and yellow flowers of *O. grande*, and is said to combine the numerous characteristics of the latter. It was described by Reichenbach in 1881. H. J. C.

Odontoglossum Sanderianum.—In size of flower or width of the segments this pretty *Odontoglossum* cannot compare with many others in the genus, but it is free-flowering and a very useful plant that should be grown by all. In growing it one or two points need consideration: in the first place, like all dwarf kinds, a large pot and a lot of compost are unnecessary, and being a strictly cool-house species it will have to be kept well up to the light and air and fairly moist all the year round. In a dark house and large pot the plants dwindle away rapidly. Although not so susceptible to injury from over-flowering as the larger-flowered kinds, it is better to be on the safe side with it, and especially on weak plants to remove the spikes after a week's flowering. The blossoms of *O. Sanderianum* are

pale yellow, with reddish spots upon the segments, and they are delicately scented.

Phalænopsis Stuartiana.—Whatever may be the opinion of metropolitan growers as to the advisability of getting these lovely Moth Orchids to flower in winter, there can be no doubt as to their beauty and utility in country collections. This is one of the best of them, and the spikes of sulphur flowers with red spots are very beautiful. A native of the Philippines, it thrives with the warmest section of the genus and is a very good grower. Fairly large perforated pans or baskets, well drained, and a compost chiefly of Sphagnum and charcoal suit it well. No water should at any time be allowed to reach the foliage, but ample moisture in the atmosphere and at the roots is essential. All changes of temperature should be brought about in a gradual manner, not hurried, as the sensitive foliage is easily injured, though possibly it may not show the injury at the time. The dropping of the leaves in spring that is sometimes so troublesome is often caused months before by some check to growth, the axils of the leaves shrivelling, and the fluids, more than usually active in spring, pushing them off. Regular and constant treatment then all the year round is the easiest way to ward off this trouble.

NATURAL HYBRID ONCIDIUMS.

It is remarkable how sparingly natural hybrids appear in this one of the most extensive of the Orchid genus. This is no doubt accounted for by the fact that the different species are particularly local in their native habitats. It is rarely indeed that more than two varieties are known to grow together, and these cases are extremely limited. One of the most distinct and beautiful of the intermediate forms that has yet appeared is

Oncidium Gardneri (Forbesi × *dasystyle*).—This was originally described by Lindley as a species allied to *O. crispum* and *O. Forbesi*. It was first collected by Gardner on the Organ Mountains in 1836. It does not appear to have been cultivated until Messrs. Rolisson received plants from M. Pinel in 1846. It has since appeared in British gardens at long intervals under different names. *O. prestantis*, *O. elegantissimum*, *O. flabelliferum* and *O. Pollettianum* are probably derived from the intercrossing of the species which are now identified in the production of *O. Gardneri*. Though differing as varieties, they have in most instances the intermediate characteristics of the parents above mentioned.

O. pectorale (Forbesi × *Marshallianum*) first appeared in the collection of Mr. J. Wentworth Buller, of Exeter, in 1840, and was described by Lindley in that year. It was imported with *O. Forbesi*. It has since appeared in several collections, and leading botanists have been misled into describing it under different names. In 1885 a plant flowered with Mr. Bull which Reichenbach described as *O. caloglossum*. In 1887 *O. Mantini* appeared in the establishment of M. Truffaut at Versailles. In *THE GARDEN*, xxxvii., p. 325, Gower describes *O. Larkinianum*. In vol. i., "Orchid Review," Rolfe describes *O. Marshalliano-Forbesi*. Though differing somewhat as varieties, there is not sufficient difference to merit distinction from Lindley's original description.

O. hæmatochilum was originally described by Dr. Lindley in 1850 from a plant in the nurseries of Messrs. Loddiges. It was not until Mr. T. T. Potter, St. Ann's, Trinidad, pointed out in vol. iii., "Orchid Review," the fact of *O. luridum* and *O. Lanceanum* growing together with the intermediate form, *O. hæmatochilum*, that the possibility of its being of hybrid origin occurred. After duly considering the facts before him and the material at hand, Mr. Rolfe came to the conclusion that it must in future be regarded as a natural hybrid. I have since seen plants in flower, and have no doubt as to the intermediate characteristics of the offspring.

O. Wheatleyanum was first described by Gower (*THE GARDEN*, 1893, p. 227) as a new species. On November 13, 1894, a plant was exhibited and received an award of merit from the Orchid committee of the Royal Horticultural Society from the collection of Mr. F. Wheatley, Teignmouth, Devon. In the "Orchid Review," vol. iii., p. 6, Mr. R. A. Rolfe points out the technical differences that exist between *O. Gardneri* and *O. Wheatleyanum*, and concludes that it is probably derived from the intercrossing of *O. crispum* and *O. dasystyle*. The original description by Gower in *THE GARDEN* of above date is as follows:—

A very beautiful *Oncidium*, which appeared with Mr. F. Wheatley, Ringmore, Teignmouth, having been purchased as an imported plant with two or three others as *O. Gardneri*. It bears a raceme of upwards of thirty flowers. The sepals and petals are marbled with reddish brown on a lighter ground, and the lip golden yellow, edged with brown, and a deep crimson area at the base. H. J. C.

NOTES AND QUESTIONS.—ORCHIDS.

Dendrobium bigibbum.—When this showy little *Dendrobe* flowers as late in the year as this, it is exceptionally useful either for cutting or mixing with other kinds in the *O*-chid house. The deep magenta-purple of the lip in many of the better forms is very striking. It thrives in ample heat with *D. Phalænopsis* and others of the Australian kinds, and should be grown in small pans close up to the light.

GARDEN FLORA.

PLATE 1254.

IRIS ALBO-PURPUREA.

(WITH A COLOURED PLATE.)*

This is a new addition to the *Apogon* division of the genus *Iris*, typified by *I. pseudacorus* and *I. levigata* (Kämpferi). In general appearance it is not unlike *I. hexagona*, a handsome species, widely distributed in the Southern United States, but, unfortunately, not hardy here except in such favoured localities as Cornwall. It is grown in the temperate house at Kew, where it is an attraction when in flower in early summer. *I. albo-purpurea* may be a native of Japan, or it may have been introduced and accidentally mixed by a nurseryman there with *I. levigata*. Its history is given in the following extract from Mr. Baker's description of it, published last year in the *Botanical Magazine*:

A few plants of this fine new *Iris* were imported from Japan, mixed with a quantity of *I. levigata*. Till they bloomed the two species looked very like one another, but when the flowers came out this caught the eye at a glance by the outer segments being much deflexed and the inner ones erect, whilst in *I. levigata* all the six spread horizontally at one level, a character very unusual in the genus *Iris*.

Both *I. albo-purpurea* and *I. levigata* were in flower together in damp ground by the side of the lake in front of the Palm house in the Royal Gardens, Kew, from the middle to the end of June, by which time nearly all the other *Irises* had faded. *I. alba* is a synonym of *I. florentina*, which is very different from the plant here figured, the name of which is a composite one, not *alba* var. *purpurea*.

W. W.

Jasminum nudiflorum.—So common is this old *Jasmine* in some districts, that it passes almost unobserved and unadmired. Yet even where plentiful it is worthy of more than a passing glance, especially when grown in conjunction

* Drawn for *THE GARDEN* in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



IRIS ALBA FURUEFA

with other plants whose foliage will make up for the bareness of the branches of the Jasmine. This year it is unusually early, and, I think, unusually fine. I have it now in bloom clambering among the branches of an old evergreen Rose, whose leaves make its soft yellow flowers doubly attractive. It does not seem the best position it could have, as it is facing east by north-east, with little to intercept the cold winds which come across an arm of the Solway some five miles or more in width. Yet it appears to thrive and bloom well yearly, although I can hardly remember it being so pretty in any previous year. No attempt is made to train it in a formal way, and this is possibly, or rather probably, one of the causes of its beauty among the branches and leaves of the Rose. Full exposure otherwise it seems to like.—S. ARNOTT, *Carsesthorpe, by Dumfries.*

FLOWER GARDEN.

A LAWN GARDEN IN GLOUCESTER.

THE freedom of vegetation and the natural toss of branch and leaf about this simple English house may well compare with the

making it peculiarly vivid. The lawns are very picturesque, from the number of large evergreen shrubs planted about them, and herbaceous plants flourish, particularly those in a border under a south wall in line with the house.

PYRETHRUM ULIGINOSUM.

THE cutting down of this and other very tall perennials naturally does not find favour with all. At the same time it must be very clear that without the dwarfing the uses to which the above may be put are much modified. I believe this dwarfing originated with myself many years ago, and was brought about more by the exigencies of the moment than aught else. I was planting a bed for stock very late in spring, and orders having been heavy, my supply was limited. At this time growth had considerably extended, and, rather than see the long tops droop and perish in the strong sun-heat—for the plants had been broken up considerably—I cut them down to within a few inches of the earth, placing no value on the flowers at all. The treatment was not what one would recommend, but so vigorous a plant was not slow in recovering. I was more than surprised at the result. The pieces planted were

over, in any case in my experience. Indeed, my one object in cutting down a part and leaving a part was purposely to test this very point, and as I experimented on a bed about 50 feet long and 5 feet wide, the evidence was very clear.

This dwarfing is a matter that should prove of value to many not only with small gardens, but others who have to make a display in autumn in various ways, on the lawn or the like. Take, for example, a bed of this a dozen feet across; what a display it would make. At the same time bold groups in their full height may still have their place in the herbaceous border, and so on. The whole of the Starworts are amenable to the same treatment, these, too, giving much better masses of bloom than cuttings and the like inserted late to encourage dwarfness. Those who value specially late things in this way will find that lateness in flowering is best secured by late annual planting in conjunction with the cutting-down system. Among plants best suited to cutting down which I have tried, Starworts, Sunflowers, Phloxes (decussata group) and the above are worthy of mention. In saying this I am far from the idea of minimising the value of our tallest and boldest autumn flowers, and the only object I ever had was that of providing a more extended use for such, and securing their inclusion in many gardens and positions from which height alone hitherto excluded them. E. H. JENKINS.
Hampton Hill.



Chambers Court, Tewkesbury. Engraved for THE GARDEN from a photograph sent by Mrs. Ward, Tewkesbury.

engravings (or diagrams rather) of the pattern garden, usually of a hard, ugly kind, with which the foregrounds of houses are not only marred, but in which the very vegetation itself has to conform to the pattern-monger's notions of "design." Whether in winter or in summer, the effect of this garden and gardens of like kind is very much more consoling to the artistic eye than the pattern garden, especially, perhaps, in autumn and winter when the forms and colours of fine trees and plants help to make up for the lack of colour in the summer garden.

Chambers Court, the residence of Mrs. J. E. Ward, is in the valley of the Severn, in Worcestershire, facing the Malvern Hills. The present house of grey stone was rebuilt fifty years ago and is now nearly covered with *Vitis inconstans*, which puts on a most brilliant crimson, something in soil or aspect

single stems, and had they so remained, a single stem only would have been made that year. The result of the cutting down, however, gave several breaks from each stem—so numerous in fact, that I rubbed off quantities and allowed at the most half a dozen to remain, some of these taking the lead for themselves. The most surprising part of all was the flowering, which was but a trifle behind the usual time, and instead of a plant 6 feet high the bed revealed a mass of pure white rather under 3 feet high. Even though I had a much more numerous display of blooms, these were still of their usual size, and I at once saw a new and extended use for one of the most showy of autumn flowers. I believe I mentioned the fact at the time. The following year I acted experimentally, cutting back early in June about half my stock and allowing the other part to grow at will. The result of this was that both flowered together, not a day separating the earliest blooms on both portions or the display at its best in the mass. The only difference was the dwarf lot had many more flowers, thus creating a splendid effect, all of which is to be seen and fully admired at 3 feet high. It is naturally assumed that the cut-back plants would be later. This is not so, how-

The Willow-leaved Ox-eye (*Buphthalmum salicifolium*).—Anyone in need of a hardy, dwarf, free-flowering plant should grow the above. A large clump produces great quantities of golden yellow flowers, which are like miniature Sunflowers in appearance. They are most useful for cutting and last in good condition a long time. Like most herbaceous plants, it is all the better for being lifted and broken up every few years. If this is not done the centre of the clump becomes impoverished, and then produces flowers of poor quality. I have never tried it, but should imagine it to be a good hardy plant to grow for summer flowering, particularly for dotting about in large beds where the mixed style of bedding prevails.—A. W.

Open-air Mignonette in November.—Too frequently late-sown batches of Mignonette get cut off by sharp autumn frosts while as yet they have been of little service. Yet where room is abundant it always pays to sow a late bed, as in exceptionally fine autumns the produce is most useful—more so, in fact, than at a season when Mignonette is common in every garden. I think the Giant Crimson strain the best for late sowings, and the ground should be in good heart. Thinning out the plants freely when young is also important, each one standing quite clear of its neighbour. Only last week I saw a beautiful lot in excellent condition in a market garden, and I have no doubt it is being turned to good account for cutting. In private gardens a bed of this description, if occupying a clear position, is deserving of a covering of garden lights to preserve it from the weather.—C.

Callistephus hortensis.—I fear there is much unnecessary fuss being made about this obviously single Chinese Aster. That it is a good garden plant one and all who have seen it frankly admit. That it is likely to become a popular plant and be grown freely by all who garden at all there is ample proof, particularly as it is sure to be cheap and as easily raised as any other of its race. But to assume that it is so much superior and quite a different thing from what Mr. J. Weathers is pleased to term "the degenerate forms of the double China Asters" is quite another matter. Assuming that the plant referred to is the true original kind, but re-introduced, what is there to prevent the cultivated forms reverting to as nearly as possible the original state? More than one writer has spoken of or in some way or other referred to the superiority of the so-called species, but the distinctions are not pointed out in any clear or convincing form.

Much very naturally in such re-introductions of long-lost plants has to be taken for granted, for of all things the most impossible in herbaria is to preserve the colour of such things even for a much less period than 170 years nearly. I have seen one or two batches of the plant, I have seen those grown in the long border at Kew, and I have carefully noted all the exhibits of the flowers sent to the Drill Hall. On one occasion quite in early autumn there were also many single *Asters* of varying colours, and among them shades and forms so nearly identical that it would be a difficult task to separate them. This much, however, was obvious, that one name would apply to all save and excepting the shades of colour. And why the one is a species pure and simple and all else but "degenerate forms of the double China Aster" when all have descended from the one originally is somewhat of a mystery. Surely it is possible that among the blue shades, which are many, there will be found single kinds that it is not possible to separate either by habit or colour from the plant referred to. Mr. Weathers says his stock comes "quite true from seed," but much the same may be said of the many varying types of this race. Should this single kind, however, persistently retain this characteristic in the face of the many groups and sections evolved out of the plant originally introduced, it will be but evidence against it.—E. H. JENKINS, *Hampton Hill*.

Epiphyllums.—It is difficult to know why these beautiful plants are not more grown. The amount of bloom produced by a healthy plant is remarkable, and the plants are very elegant, though quaint-looking when out of flower. Besides the older species, which have long been known in our gardens, there are several new varieties that should increase the popularity of the genus, some of which have been figured from time to time in THE GARDEN. It is usual to graft the *Epiphyllum* on the *Pereskia* at various heights, but I consider they are far prettier when grown entirely on their own roots and allowed to droop naturally about the pots or baskets in which they are grown. True, grafted plants give far less trouble in repotting and other cultural details than do those on their own roots, but I think the latter are worth the extra trouble. The idea that all the *Cactus* family live and thrive best on the poorest and most sterile of soils and with hardly any water is a mistake, for if healthy plants and healthy roots are there they will stand a fairly liberal supply of moisture while growing, and a compost consisting of good fibrous loam and peat, with plenty of broken charcoal or sandstone to keep it well open. During the period of rest, of course much less moisture is necessary—only sufficient, in fact, to prevent shrivelling.

TROPÆOLUM TUBEROSUM.

MR. TALLACK'S surmise (p. 486) that the original tubers of this climbing plant were sent here by him is correct, and I may add it is but one of several most interesting and beautiful subjects by which this garden has from time to time been enriched from the same source. Some of these were received during the time that Mr. Tallack held an appointment in Cornwall, and although the climatic differences which exist between that favoured county and Scotland were too great for the well-doing of a few, yet the majority made good progress and have added considerably to the wealth and importance of the hardy plant department here. Furthermore, a quarter of a century's mutual friendship and regular correspondence with Mr. Tallack have resulted, as may be readily supposed, in the gaining of many useful hints and observations, apart from the many concise, clear, and practical articles on a great variety of subjects which for years have so frequently appeared in the pages of THE GARDEN and other papers from his pen.

There is one point in connection with *T. tuberosum* that, so far as I am aware, has not been touched upon during this correspondence, viz.,

the attractiveness of the tubers themselves. These when fully grown are from 4 inches to 6 inches in length with rather deep sutures in which are numerous eyes or cavities. The ground colour of these when dug is dull yellow, plentifully streaked and blotched with crimson, which as the tubers ripen becomes intensified, when they are really very pretty, more so than any other, bulb or tuber, that I am acquainted with. The edible qualities of the tubers have often been mentioned, but I have never put them to the test, although in places where the plant thrives it could be done without much sacrifice of the stock, for in good soil and positions these are produced almost as freely as early kidney Potatoes. Ten days ago, when severe frost was anticipated, all our clumps were lifted, the doing of which presented an excellent opportunity of observing the effect that diverse soils and situations have upon the size and increase of the tubers. In this soil appears to have most influence for good, as where the same was well prepared and of a light sandy nature the tubers were the finer, whether the position was well exposed to the sun or otherwise. In some cases where leaves and other vegetable matter had collected and decayed about the stems and foliage, the tubers were found to be protruding above the soil, and the colouring of these was much more distinct than in those covered by the soil.

JAMES DAY.

Galloway House, Gariestown, Wigtownshire.

NOTES AND QUESTIONS.—FLOWER.

Naturalising *Cypripedium Calceolus*.—I have secured, by kindness of Mr. Heinrich, some extra good seed of this scarce native plant. If any plant lovers living in a likely neighbourhood (chalk soil and woodland) would like to endeavour to naturalise it, I shall be happy to give them small packets so long as my supply lasts.—H. SELFE-LEONARD, *Guildford*.

Strong-growing Violets.—In a recent note on single Violets it was stated that the foliage of several of the latest introduced single kinds was so large as to be ungainly and ill adapted for use in bunching the flowers. I think so too; in fact, I think the flowers themselves individually will, if they go on increasing in size, soon assume the form of vulgarity. I am much afraid size is being considered at the expense of fragrance, and exclude this latter feature from the Violet, and what is it? To have single Violets the size of Pansies, yet minus fragrance, may be all very well for the hunter for novelties, but the true lover of this beautiful flower prefers a variety half the size if the perfume be there.—C.

THE WEEK'S WORK.

FRUITS UNDER GLASS.

FIGS.—Those having to depend on planted-out trees for giving the earliest crop should now be thinking about making a start with those intended to give a crop in May, and where the trees are well furnished with well-ripened growths and with roots confined to inside borders there is more satisfaction to be gained from them than there is from a houseful of pot Figs, and a greater weight of crop can be had from them. Of course, there may be more anxiety when one has to depend on one or two trees only, but I have never found any crop more certain than that of the Fig when the roots are under control and the head trained close to the glass. In such positions Brown Turkey forces as well as the softer-fruited varieties now so much in vogue for forcing, and, taking all things into consideration, there is no Fig so valuable as this well-known variety when treated as the principal occupant of the house and given the best position in it, instead of having to take a secondary place on the back wall of a house with the roof devoted to some other crop. The Fig, not being a gross feeder, except during the summer months, and enjoying a poor root-run at other seasons, should not be subjected to the annual manurings and

top dressings considered so essential to the welfare of many other fruits. All the feeding it wants can be better given in the form of liquid manure later on. For the present all that will be necessary is to see that the border is not dry, or if it is so, that it gets a good soaking before being put to work. Trees that have been infested with bug should again be carefully gone over in search of stray insects, as the Fig is difficult to clean during the growing season. It may be necessary again to say that strong insecticides must on no account be used on the young wood of the Fig tree, and I attach far greater importance to vigilance and a quick eye on the part of the man or men told off to do the work than on the efficacy of any special insecticide, as I have not found one of these preparations which can be used strong enough to kill bug by contact alone that will not injure the wood of the tree. If feasible, a nice bed of leaves and manure should be made up inside the house to assist in keeping up a genial temperature and atmosphere without the aid of a great deal of fire-heat, and this is especially essential now when we are just approaching what usually is the coldest part of winter. To commence with, a minimum temperature of 55°, or even of 50° in case of very sharp weather necessitating hard firing to reach the higher temperature, will be sufficient until the young fruits show that they are swelling away, after which the night temperature may be gradually raised a few degrees at a time. The trees may be syringed over once or twice daily, but the water used should be tepid and applied more in the form of a dew than in that of a deluge, more especially at the afternoon syringing. Very little ventilation will be needed in the Fig house for some time to come, as the young growth is susceptible to injury from cutting draughts. The general rules applied to forcing Vines are equally suited to Figs. Late houses should be put in order, all arrears of pruning and cleaning finished up as soon as possible, and the trees should be tied into position, as there is less danger now of injuring the embryo fruits from rubbing than there will be later on.

CHERRIES.—The Cherry is a most excitable tree and may readily be forced for ripe fruits early in May; indeed, its excitability forms one of the chief dangers in forcing it, as anything like driving is resented by the flowers failing to set and by the fruits dropping soon after they have formed. This should be borne in mind and acted upon by only allowing a minimum temperature of from 40° to 45° at the time of starting and allowing only a few degrees rise at a time up to the time of stoning, after which it is only safe to allow any actual "forcing" of the fruits. A close atmosphere, too, must be avoided, as this neither flowers nor fruits will stand, so that it will readily be seen that progress must at all times be slow, and that even an occasional over-heating of the pipes or a temperature too high will do irreparable damage. Another thing to be rigorously avoided is dryness at the root, for the Cherry likes water when the drainage is effective, which it always should be. No other tree is so susceptible to the attacks of aphides, and these should be watched for from the very first, as they develop with the buds and do great harm if left alone; consequently periodical fumigation must take place frequently. Ventilate little or much, according to the weather, daily, but do not neglect the little at any time after the buds are moving.

POT VINES.—Those started before the middle of November should now be breaking nicely, and if the break is regular all along the rods, there should be no further delay in tying them up into position, as there is less fear of breaking or damaging the shoots now than there will be when they have become more forward. Any which are breaking irregularly and weakly towards the middle of the rods must, however, be kept in the bent position for a while longer to strengthen the weakly breaks. When it can be seen which are the most likely looking growths, the others may be rubbed off, reducing

the breaks to the number required to furnish the Vines without crowding, but the final disbudding should not take place until the embryo bunches can be distinctly seen, as it is not always the most promising-looking breaks that carry the best bunches. The minimum temperature of the house may be raised to 60° with the usual rise of 5° by day, and these figures may be kept up until the Vines are in bloom, when a further rise will be necessary. The Vines will not yet require much water, as there is but little call on the roots during the early stages of growth, and it is easy to make the mistake of over-watering. At the same time, they must not be allowed to get absolutely dry. I do not advise the continuance of overhead syringing after growth has really commenced, and depend on supplying the proper amount of humidity with the evaporation from the hotbed, coupled with occasional damping down.

PINES.—In the Pine houses there will not be much to do outside of the usual routine, but it will be as well to look over the stock of Queens prepared for fruiting next summer and which have been kept on the dry side and slightly cooler for resting purposes, selecting the most forward and starting them again for providing fruit in June. These plants should be given a good soaking of water, and the bottom-heat should be raised with a view to giving them the necessary impetus to grow. Succession stock should be kept on the move without absolutely forcing growth. Cover the houses and pits nightly with some warm covering material such as frigi domo, or two or three thicknesses of mats, which to be really serviceable should be dry when put on. They are then welcome aids to the fire-heat.

MELONS.—Very early Melons are not particularly easy to manage, but if they must be had it is necessary to sow the seeds during the very dullest time of the year; consequently extra precautions must be taken to prevent the seedlings from becoming drawn during the early stages of growth. Some plunging material should be brought up close to the glass, though not out of reach of the bottom-heat, and in this the seed-pots should be plunged after sowing. Sow seeds singly in 2½-inch pots, giving no water until they have germinated and appeared above the soil. A high temperature, i.e., as near 70° as possible, should be given, and all available light will be required at all stages after germination takes place.

CORNUBIAN.

KITCHEN GARDEN.

HOTBEDS.—By the time this calendar appears many gardeners will be thinking of making the first hotbed. If made up now, any excess of heat will have a chance of escaping by the first week in January. Those who may have to produce new Potatoes, Horn Carrots, and Radishes in April take care to collect leaves in quantity early in autumn, and if stable litter has to be used to mix and sweat them previous to using. Beds that are made up hurriedly with fresh litter material invariably cause no end of trouble, as, although owing to a sudden lowering of temperature out of doors the bottom-heat declines to what is considered a safe figure, they suddenly rise on a return of mild weather, and in spite of airing by night as well as by day, growth appears far too soon and is weak and spindly. It is astonishing what a moderate amount of heat is required to start the tubers and maintain growth in a healthy condition, and any slight deficiency in the bottom-heat can be made good, should sharp frost intervene, by building up linings to the top of the frames. Still, it is advisable to have the beds a foot higher all over than is necessary for the successional ones for February plantings. The great point in building hotbeds is to put on moderate layers of leaves previous to treading, otherwise they will be spongy, and when the soil is thrown in the frames will sway on one side, which, to say the least, looks very unworkmanlike. Let the linings be well trodden and

beaten with the back of a five-tined fork at frequent intervals, or they soon collapse when weight is put upon them. If in a few days the heat of the beds is not excessive, the soil may be thrown in, and when warmed through the tubers planted. A somewhat light loamy compost rendered porous by the free admixture of old Mushroom manure, and, if not in very good heart, enriched by a sprinkling of some approved fertiliser will form a safe and lasting medium. Farmyard manure I do not approve of in the culture of Potatoes in frames and pits, as at this sunless period of the year a consolidated stem growth cannot be secured if such stimulants are used. It is easy to supply the roots with liquid manure when the tubers have formed later on. A depth of about 9 inches of soil is a good one, this being increased somewhat when the slight earthing up is given. The less earthing is practised with early Potatoes either under glass or in the open air the better, as it can only have one effect, that of excluding sun and air at a time when these important agents are scarce. Planting completed, admit air in small quantities daily when warm, as there is sure to be a certain amount of steam generated, which is best liberated, otherwise it condenses on the sash-bars and then drips into the soil, which is an evil. A few words must be said respecting varieties. There are several good newer sorts, but I should be sorry to discard Ringleader. As a rule one can rely on a large percentage of good-sized tubers at each root, and it is of good colour and table quality, Ninety-fold and Early Racehorse also being good, but, as previously intimated, much depends on culture. For successional planting a month later I have found Puritan and Sutton's Seedling both respond readily to frame culture, only, of course, being strong-growing sorts, sufficient room must be allowed between the soil and the glass, and pegging the growths resorted to. Only some two, or at the outside three, growths should be allowed on each tuber, as sun and air will be excluded. It will pay those who have spare ground close up to a south wall to prepare it now for the reception of a few early Potatoes in February. In such a position the young, tender haulm can be protected by means of canvas mats, old bags, or litter from night frosts. I do not advise sprouting the tubers to any great extent for this planting, as sometimes the growths get a check. If the sprouts are just formed that is sufficient.

CARROTS.—Christmas is a good time to sow in a two-light frame elevated on a gentle warm bed one or more varieties of extra early Carrots. For the first drawings there is perhaps yet nothing to beat Parisian Forcing, but for the principal crop in frames and pits my experience is that Market Favourite, a stump-rooted variety of great excellence, is unsurpassed. This sort has also a small core compared with some others. I have usually been able to draw it ten days or so in advance of the good old Nantes sown at the same time. The latter, however, is a brilliantly coloured, richly flavoured Carrot, and may do better with some than other sorts. In regard to the distance between the rows, if no other vegetable, such as Cauliflower, Lettuce, or Cabbage, is to be sown in the same frame, 9 inches will suffice. The one great evil in associating Carrots and Cauliflower is that the latter wants almost complete exposure to the air while as yet the former are too young and tender to stand it, and if once young Carrots become stunted through a check they seldom start again. I have often given Carrots 12 inches between the rows, and sown broadcast early Radishes, such as Wood's Frame or French Breakfast; the joint crops then do very well.

J. C.

California winter notes.—The winter of 1899-1900 will long be remembered in California for its extreme mildness and beauty. We have had several hard years of short rainfall and severe frosts. Now we have an autumn so far

without frost, rainy, and yet filled with much sunshine, as most of the rain has fallen at night. The following notes taken during a journey over California will show the character of the season (November 20-26). Near Sacramento, the capital of the State, I saw a field of wheat headed out and ready to be cut. This grew on unploughed land from the grains of wheat falling from the header last August or September, and sprouting with our early rains. At Chico, in the Sacramento valley, nearly 100 miles north of Sacramento, hardly a deciduous tree has begun to shed a leaf. Some Cherry blossoms are to be seen in the orchards; *Acacia cyanophylla* is fairly well in flower. In the region around the bay of San Francisco white *Heliotropes* and *Nasturtiums* are in full bloom. Roman *Hyalcinths* left in the ground in naturalised clumps are showing colour, and will be in flower in a few days more. All the spring bulbs appear to be a month in advance of the ordinary season. The Kai Apple (*Aberia caffra*), described in Von Mueller's "Select Plants for Extra Tropical Culture," &c., comes to its greatest perfection at Santa Monica. A plant there (five years old) is 6 feet high and quite as much across. It grows on a dry and rocky slope facing south, and on November 24 when I examined it the bush was heavily laden with large yellow fruits of better quality than elsewhere produced in California. A very fine jelly was made from some of these fruits. This plant promises to have a distinct value for hedges on such barren soils as this, but it does not endure much frost. *Stanotonia hexaphylla*, an interesting broad-leaved evergreen Vine from Japan, fruited at Santa Monica in 1896 and again this season. *Schinus terebinthifolia*, a fine large-leaved Pepper Tree introduced from Brazil, has now fruited in the fourth year from seed.—C. H. S.

TREES AND SHRUBS.

THE ALDERS.

FRINGING the banks of the rivers and brooks and growing in marshes throughout the whole of Europe, Asia northward from the Himalayas, and North America, as well as on the Chilean Andes, the Alders are often the most frequent of trees, and contribute in no small degree to the beauty of the landscape. According to the ideas of the individual botanist as regards specific rank, the genus contains from about fifteen to more than double that number of species, many of them furnishing well-marked varieties and most of them being known in cultivation. The habit, too, varies considerably, some of the kinds never getting to be more than bushes, others often attaining a height of 70 feet or 80 feet; indeed, under different circumstances the same sort will often run through all the intermediates between a small bush and a large tree, as, for instance, our native Alder, which on high hills does not reach a quarter the height it attains in the richer soil of the more sheltered valleys. In some places this is largely grown to produce charcoal for the manufacture of gunpowder. The timber is soft and of no great value, but it is extremely durable when buried under ground or immersed in water. In Holland it is extensively used for forming piles, and its adaptability for this purpose has been recognised from a very early period, Pliny calling it "eternal." According to Vitruvius, the city of Ravenna was built upon it, and Evelyn states that the celebrated bridge of the Rialto at Venice was built on Alder piles. About a century and a half ago enormous numbers of plants were imported from Holland to Scotland at a considerable price and planted in large tracts of moist land. Boucher, who records the fact, informs us, however, that no returns suitable to the labour and expense in-

curred were received. The common Alder does not seem to have been regarded with much favour by many writers as an ornamental tree, although it is one of the finest of aquatic trees; indeed, Gilpin places it, after the Weeping Willow, as the most picturesque of all. With



Alnus viridis.

Gilpin Sir Thomas Dick Lauder fully agrees. He says:—

It is always associated in our minds with river scenery, both of that tranquil description which is most frequently to be met with in the vales of England and with that of a wilder and more stirring character which is to be found among the glens and ravines of Scotland. In very many instances we have seen it put on so much of the bold, resolute character of the Oak, that it might have been mistaken for that tree but for the depth of its green hue. The river Mole may doubtless furnish the traveller with very beautiful specimens of the Alder, as it may also furnish an example of that species of quiet English scenery we have alluded to, but we venture to assert that nowhere will the tree be found in greater perfection than on the banks of the river Findhorn and its tributary streams, where scenery of the most romantic description everywhere occurs.

An advantage the tree doubtless possesses over many deciduous ones which affect drier situations is its tendency to retain its foliage after they have shed theirs. There is, how-



Alnus glutinosa.

ever, a great deal of difference in this respect among the numerous species and varieties, several of the varieties of the common Alder being in good foliage after that of the type has fallen. Although in a state of Nature most of the Alders are found where their roots can at all times command an abundant supply of moisture (and under such conditions they reach their fullest degree of development), they will

grow well in all but the lightest and driest soils. I believe that all the species known already in cultivation fruit freely in this country, and can be most readily propagated by means of seeds. The numerous very strange and ornamental varieties require to be reproduced by layers—a very easy process—or propagated by grafts, using the common Alder or other vigorous kinds as stocks.

Common Alder (*ALNUS GLUTINOSA*) has a wide geographical range, being found wild throughout Europe, North Africa, West and North Asia to Japan. It has black bark and rounded, somewhat wedge-shaped leaves, wavy at the margins, and deep green both above and below; these when young are, as well as the young shoots, covered with a glutinous substance, whence the specific name.

The following are the most striking varieties of this species:—

Hawthorn-leaved common Alder (*A. G. VAR. ONYACANTHIFOLIA*) is a dense-habited bush or small tree with leaves much smaller than those of the preceding, resembling in a marked degree those of the common Hawthorn.

Oak-leaved common Alder (*A. G. VAR. AUREA*) has leaves exactly the size and shape of those of the species, but of fine golden yellow colour. In suitable situations it does not scorch, and although it is of somewhat slow growth, it is a shrub decidedly worth growing in the choicest collections.

Red-veined common Alder (*A. G. VAR. RUBRO NERVIA*) is a vigorous grower, with the habit and leaves of the type, the leaf-stalk and midribs being, however, a bright red.

Large-fruited common Alder (*A. G. VAR. MACROCARPA*) differs from the typical *A. glutinosa* principally in its larger fruiting catkins and bolder leaves, and also in its more vigorous mode of growth.

Fern-leaved common Alder (*A. G. VAR. IMPERIALIS*) is a distinct and handsome tree with elegant drooping branches and Fern-like leaves, which are more deeply cut than those of the next variety. In some nursery catalogues it goes under the name of *Asplenifolia nova*.

Cut-leaved common Alder (*A. G. VAR. LACINIATA*) has deeply pinnatifid leaves which, from their tendency to open out quite flat, give to the tree a totally distinct aspect from that possessed by the last named variety, in which the leaves are very often concave and the lobes always longer and narrower. As to the origin of this, Loudon quotes Thoin, who in the year 1819 in the "Nouveau Cours d'Agriculture" states that the cut-leaved Alder was first found by Trochereau de la Berlière, and planted by him in his garden near St. Germain, where the stool still remains from which all the nurseries of Paris have been supplied with plants, and probably all Europe. There is also a variety with variegated foliage, and another, *Alnus emarginata* (Willd.), with nearly round, wedge-shaped leaves, dark green, with an edging of light green.

Bearded Alder (*A. BARBATA*) is by some regarded as a variety of *A. glutinosa*. It is a native of the Caucasus, being found on the western side of the Caspian Sea. It differs widely in its foliage from the common Alder, its leaves being pointed, having more or less doubly serrated margins, and often attaining a length of 6 inches or more by a breadth of 4 inches or $4\frac{1}{2}$ inches; on the upper surface they are dark green. The most striking characteristic of the plant is furnished by the bright red-brown hairs which clothe the midrib and principal veins on both surfaces of the leaf, and are so marked as readily to catch the eye.

Oblong-leaved Alder (*A. ORBONGATA*) is a large shrub or low tree from South Europe and North Asia, introduced by Miller in 1749. It has obtuse, somewhat egg-shaped, glutinous leaves, the axils of the veins being naked on the under side. Loudon says the finest tree of this sort of

which he has knowledge was one in the Glasnevin Botanic Gardens, which in 1834 was 30 feet high.

Heart-leaved Alder (*A. CORDIFOLIA*), sometimes also called the Neapolitan Alder, is a very distinct and handsome South European tree; its leaves being nearly or quite smooth and of a glossy green, a shade or two lighter than those of



Alnus incana.

the common Alder, give it almost the aspect of a Poplar. It is a fast growing tree with light coloured bark, and from its fine pyramidal habit it is very effective either in groups or as a single specimen. It remains in good foliage some time after most Alders are leafless, and is perfectly hardy in this country. The flowers are produced in March and April before the development of the leaves. The date of its introduction to this country is 1820.

ALNUS NERVOSA differs from this in its more rounded leaves, which are not so decidedly heart-shaped at the base; it, however, seems to grow quite as quickly as *A. cordifolia*, and to resemble it considerably in other respects.

A. SUBCORDATA is another Alder, a native of the Caucasus, which is also referred to as a variety of this species; its foliage is, however, very much larger and bolder, darker green, and its general aspect is widely different from both *A. cordifolia* and *A. nervosa*. Its leaves measure about 6 inches long by 4 inches wide, whilst those of the two others just mentioned are about 3 inches long by 3 inches wide; the relative length, too, of the leaf-stalks is different, those of *A. subcordata* being much shorter than the others.

Hoary-leaved Alder (*A. INCANA*) is one which will attain a good size even in dry localities, and which as an ornamental tree is well



Alnus glutinosa laciniata.

worth growing. It, as well as its varieties, is easily recognised by the smooth greyish bark of the stem and twigs and by the grey-green under surface of the leaves. In shape the leaves are ovate, pointed, with margins primarily divided into coarse teeth, which are themselves serrulate. In size they are about 4 inches long by 2 inches wide. It is found wild in North America (where it is known as the Speckled Alder), and is pretty widely distributed throughout the north temperate zone. The best of the varieties which

have at various times received names in different nurseries, &c., are as follows:—

A. LACINIATA, an oblong tree, with handsome foliage somewhat like that of *A. glutinosa* var. *imperialis*; the leaves are often from 6 inches to 7 inches long.

A. SUB LACINIATA has smaller leaves with deeper primary divisions than *A. incana*, the secondary teeth, too, being much more evident.

A. PINNATIFIDA when casually examined seems to come extremely near the last-named, but for gardening purposes it is quite distinct; it is of slightly different habit, and the form, size and serration of the leaves render it well worthy a varietal name.

A. GLAUCA has prettily serrated leaves (the petioles of which are reddish), deep green above and glaucous beneath. This, one of the most beautiful kinds of the genus (according to Michaux), forms a tree in the United States from 15 feet to 20 feet high.

A. ANGULATA differs from *A. glauca* in its leaves being green underneath, and in its having green, not red, leaf-stalks.

Saw-leaved Alder (*A. SERRULATA*), a shrub from 6 feet to 10 feet high and a native of North America, makes a very pretty bush with its deep green foliage. The three following, which are sometimes classed as varieties of *A. serrulata*, nevertheless differ from that very considerably.

A. AUTUMNALIS has handsome leaves 6 inches long by about half that width, doubly serrated at the margins.

A. RUGOSA has leaves rather smaller than the last and more rugose.

A. LATIFOLIA has large rounded leaves, sometimes sub-cordate at the base, and with crenulate, weakly serrated, decidedly wavy margins. They measure about 5 inches or 6 inches in length by 3 inches or 4 inches in breadth.

Curl-leaved Alder (*A. UNDULATA*), a native of North America, was introduced in 1782 by the Hudson's Bay Company. It is a small shrub, not growing more than 3 feet or 4 feet high in the swamps of the mountainous regions where it is found wild, though Willdenow states that in 1811 a tree in the Berlin Botanic Garden had reached the height of 15 feet.

Birch Alder (*A. ALNO-BETULA*) is a handsome bush found wild in the mid-European and Italian mountains. It flowers in April (often in March) and produces a plentiful crop of very pretty catkins. The leaves are egg-shaped, pointed, and the same deep colour on both sides. In a state of Nature it only grows about 5 feet or 6 feet high, but in cultivation makes an elegant little tree about double that height.

Oriental Alder (*A. ORIENTALIS*) is a quick-growing tree, with noble leaves measuring often 9 inches to 10 inches long by about 5 inches broad. This, a native of North and East Asia, is still somewhat rare in collections, but it deserves to be much more generally known, its pyramidal habit and enormous ovate, acuminate leaves giving it quite a character of its own.

Japanese Alder (*A. JAPONICA*) is a most distinct shrub, with lance-shaped leaves 4 inches or 5 inches in length by 1 inch or 1½ inches broad, the margins of which are slightly serrulate. In colour the upper glossy surface of this pretty sort is a shade or two lighter than in most other Alders, the whitish veins being very conspicuous on the light-coloured under surface.

Trees at Corsham Court.—On the lawn at Corsham Court, Wilts, the residence of Lord Methuen, there are a few unusually fine specimen trees, some of which in their character of growth are very remarkable. The most noteworthy of these is a cut-leaved Plane. This is a noble tree, having a circumference of 20 feet at 3 feet from the ground and a spread of branches extending nearly 140 feet. This branch-growth does not extend from the bole or stem itself direct, but the lower ones touching the ground in a pendulous manner have rooted and given rise to an independent outward growth in every direction. One branch in particular at the point where it joins the tree would measure perhaps 6 inches

or 7 inches in diameter; beyond and where it rises from the soil it forms quite a heavy tree. It has a height proportionate to its great breadth. Whether this pendulous nature is an outcome of the nature of the soil or the surroundings is not easy of explanation; it is a characteristic not confined to one tree or variety. Copper Beeches are very fine in growth and leaf, and one of these has quite a broad base from the extension of the ground-rooted branches. Horse Chestnuts and Cedars both sweep the ground. One of the finest Elms I have ever seen is here. At 3 feet from the ground it measures 20 feet round; higher up it is considerably larger, and to the eye presents a great mass of solid timber. There are other noteworthy specimens, including an *Abies excelsa*, very old and from 80 feet to 90 feet high. The Tree of Heaven (*Ailanthus glandulosa*) is striking even when without leaves, its growth being so distinct and noble. There are also a very fine Tulip Tree and *Salisburia* of lofty stature. A *Catalpa* close to the house is a wreck, but its prostrate stem has many smaller branches growing freely, and in close contiguity is a flourishing specimen that has arisen from a natural layer. This was separated not long since from the original, and would now appear to have had no relation to its aged parent. —W.

THE HARDY SPECIES OF SMILAX.

COMPARATIVELY few species of this genus can be grown out of doors, but they are almost all evergreen, and all are so distinct in character that they merit attention. *S. herbacea* can be grown as an ordinary herbaceous plant, but with this exception, they require, in all parts of the kingdom, the most favourable position that can be given them. They are most suitable for walls, but several may be grown over large tree roots or may be trained over Spruce trunks, requiring in this case the most sheltered position that can be found. In some cases it is not the low winter temperature that kills, but rather the insufficiency of summer warmth that prevents development. The subject of the accompanying illustration is absolutely hardy, but only on a wall or wooden fence can it attain the beauty of which it is capable. In such a position it is really very ornamental. The naming of the species is exceedingly difficult. In referring to herbaria, specimens are sometimes identical except for some one feature, the value of which it is impossible to determine, and specimens in one or two cases more nearly match what they could not possibly be than anything else. Certainly the genus is very variable, and from the same plant very unlike specimens may sometimes be gathered. From an old stump of the present plant, low down beneath the dense growth, I have gathered specimens which are almost identical with specimens of *S. Bona-nox*, from which, on the whole, it entirely differs. I have made repeated efforts at Kew to name this plant, but have failed to match it, unless with a specimen named *S. hispida*, which this could not be. The genus was monographed by the late Prof. A. de Candolle, and I am indebted to Prof. C. de Candolle for kindly comparing specimens with those in his late father's collection. He informs me that it cannot be identified with any one of them. Since, therefore, it cannot be identified, I propose for garden purposes to call it *S. Cantab.* It may conveniently be connected with the Cambridge Botanic Garden, and no descriptive name could be given that would not equally apply to some other species. It may yet prove to belong to some already described species, but to name by the monograph referred to requires the female flowers, and as this is a male plant there is no hope of identification until it can be matched with some authentic living or dead specimen.

The cultivation of the genus is not at all difficult. All the kinds respond to good soil, and if the soil is not good it should be made so. If suitable cuttings can be got they will usually strike, but there is sometimes difficulty in rooting them. The plants may sometimes be divided, or pieces may be taken off, which readily make plants, and this is usually the surest method of propagation for hardy kinds. The following are the more hardy kinds of *Smilax* cultivated in this country:—

Smilax aspera.—This is a well-marked species, with angular and usually prickly stems, reaching a height of about 5 feet, or even 10 feet. The leaves are ovate-hastate, cordate at the base, the principal veins with a few prickles and often the margin as well. In colour they are dark green, with flecks of white on the upper surface. The flowers are whitish and fragrant. It is a native of South Europe, the Canaries, &c., and is represented by numerous forms.

S. a. var. Buchananiana.—With this variety I am acquainted only by a specimen at Kew. It has a long leaf, with numerous marginal setae. I do not find the name in books, but the plant is distinct and is probably a native of India.

S. a. var. maculata.—Under this name a very neat-habited plant was formerly more common than it appears to be at present. It is marked by a dense growth of slender stems, reaching a height of about 3 feet and bearing leaves of small size, so dark as to be almost coppery in colour. The plant to which the name belongs is a native of India.

S. a. var. mauritanica is a distinct variety, if, indeed, the plant is not even worthy of specific rank. It has angular stems, which, under favourable circumstances, reach a considerable height. The stems and branches have few prickles, and they are rare on the leaves. It is a handsome plant, native of the Mediterranean and the Canaries. An illustration of *S. aspera* var., regarded as approaching this variety, will be found in the *Gardeners' Chronicle*, December 20, 1884, p. 785.

S. Bona-nox (Bristly Green Brier).—The root-stocks have large tubers; the stems are terete or slightly angled, the branches often four-angled; the leaves are usually deltoid-hastate, green and shining on both sides, and their margins are fringed with needle-like prickles. Stout prickles are also scattered over the stems. This species appears to me easily distinguished among other cultivated kinds by the green, deltoid-hastate leaves, which are fringed with slender prickles. *S. Bona-nox* hastata is a form with pronounced basal lobes. It is a native of North America.

S. China (China root).—This species is not evergreen. It has a large and edible fleshy root. The stems are terete, here and there furnished with strong sub-recurved spines. The leaves are ovate-retundate and glossy, the young ones abruptly narrowed and acute at the base, at length cordate at the base, cuspidate or even retuse at the apex. It is a native of China and Japan.

S. Cantab.—For many years this has been cultivated in the Cambridge Botanic Garden, and the accompanying illustration shows well what it is from a garden point of view, as grown against a shed facing west. It is evergreen. The strong shoots reach a height of about 12 feet or more. The stems are round, armed with strong, straight green prickles three-eighths of an inch long; the branches are slender, nearly tetragonal, and are usually without prickles. The finer leaves are nearly deltoid in shape, cordate at the base, and without the petiole are usually rather broader than long, measuring about 5 inches in length and 5½ inches in breadth. They are five-nerved, with one or two extra nerves in the basal lobes, papery in texture, green on both surfaces, with a few spots of grey on the upper surface, and along the margin are a few small prickles not conspicuous, but easily felt by the hand. The smaller leaves are often as broad as long, but they tend to be narrower and to be less cordate at the

base. The male flowers are fragrant, produced on umbels of about eight to twelve; the peduncles are about as long as the petioles, or rather longer. The stamens are six in number, and the anthers are about half the length of the filaments. This plant is, perhaps, nearest to *S. rotundifolia* among the harder kinds, but the leaves differ distinctly in shape. A plant I believe to be the same is grown by Canon Ellacombe as *S. China*.

S. excelsa.—According to a description this is a high-growing species with sub-quadrangular branches, the older ones slightly angled and punctate. The leaves are broadly ovate, acute, sub-cordate at the base, seven-nerved, usually unarmed, but with petioles and veins remotely aculeate, the margin thinly erose-denticulate. The anthers are more than half the length of the filaments. It has red berries. It is a native of Eastern Europe, Persia, and the Azores.

S. glauca.—The height of this plant is about 3 feet. It has terete stems, branches and twigs angled, armed with rather stout numerous or scattered prickles, or may sometimes be without any. The leaves are partially persistent, ovate, acute or cuspidate at the apex, sometimes cordate at the base; they are glaucous beneath and sometimes above. Native of N. America.

S. herbacea.—I am not sure that this is worth cultivation outside of a botanic garden, but it is easily grown as an ordinary herbaceous plant and is sure to be interesting. It is the Carrion Flower of North America, growing from New Brunswick to Ontario, and south to Florida, Louisiana, and Nebraska. It is native also of Japan. The tubers are numerous, short and thick, the stems unarmed, usually branched, and bearing ovate or lanceolate leaves with numerous tendrils. Its herbaceous habit distinguishes it from all others in cultivation.

S. hispida.—This is quite a distinct plant on account of the stems, which are usually thickly hispid with slender straight prickles. The leaves are ovate, thin, and green on both surfaces, and with even or more nerves, the margins usually denticulate. It is a native of North America.

S. laurifolia.—A high climbing species, the stems round, armed with strong straight prickles, the branches angled, mostly unarmed. It is evergreen, and the plant is easily recognised by its leathery, bright green, three-nerved leaves, elliptic or oblong-lanceolate in shape. It is a native of North America. A fine specimen of this I have seen in Canon Ellacombe's garden at Bitton.

S. pseudo-China.—The lower part of the stem is armed with straight, needle-like prickles, the upper part and the branches mostly unarmed. The leaves become leathery when old. They are ovate, often narrowed about the middle or lobed at the base, seven or nine-nerved and green on both sides, sometimes denticulate on the margin. It is a native of North America and the West Indies.

S. rotundifolia (*S. caduca*, *S. quadrangularis*), Greenbrier.—A high climbing species with large, thin and nearly round leaves. The stems are terete and the branches and young shoots often four-angled. The prickles are stout, scattered and sometimes a little curved. This is a handsome strong-growing species, and I have had fine specimens from Mr. Burbidge, of the Trinity College Botanic Gardens, Dublin. It is a native of N. America.

S. tannoides.—Under this name at Kew in the Bamboo garden is a plant of very satisfactory qualities, growing freely and illustrating well how such a plant may be used to ramble over tree stumps and help to make a mass of picturesque vegetation. It has the habit of a free-growing *S. aspera*, and at the time of my visit was bearing numerous black berries. The leaves are very nearly ovate, and to my recollection are without the broadened base common to *S. aspera*. M. Alphonse de Candolle does not allow the name *tannoides* to stand, and I have not been able to satisfy myself that this plant can be either of those to which *S. tannoides* is referred. It might be *tannifolia*, but that species is described as

having an annual stem, which this does not seem likely to possess.

S. Walteri has stems angled, prickly below, the branches usually unarmed. The leaves are ovate or ovate-lanceolate, cordate or sub-cordate. The berries are bright red, but I am not aware that they are produced in this country. It is a native of N. America.

Cambridge.

R. IRWIN LYNCH.

Clerodendron trichotomum.—Though this *Clerodendron* may be of no value as a flowering shrub in Scotland as mentioned on p. 367, yet in the southern portion of England, including the London district, it can usually be depended upon to bloom well, and in this stage it is very orna-



Smilax Cantab in the Cambridge Botanic Gardens. From a photograph sent by Mr. R. I. Lynch.

mental. The white flowers which protrude from inflated red calyces after the manner of some of the tender kinds, are disposed in an open panicle, and being at their best in early autumn, form a very attractive feature, as so few shrubs are then in bloom. A hot summer such as the last is particularly favourable to flowering. Before they drop the leaves often become suffused with bronze. The second species alluded to in the same article as *C. Bungei* is perhaps more generally met with under the specific name of *fetidum*. It also flowers around London, particularly after a hot summer, but is at its best at the foot of a south wall or some similar spot. This species is totally distinct from *C. trichotomum*, the stems being only of annual duration, but of a sturdy nature,

and will reach a height of 4 feet to 5 feet. The large heart-shaped leaves are decidedly ornamental, while the bright rosy red blossoms are closely packed together in a terminal head. The flowers are sweetly-scented, its specific name of *fetidum* being derived from the unpleasant odour given off by the foliage if bruised or roughly handled.—T.

FERNS.

FLOWERING FERNS.

ANEMIAS.—It is to the *Anemias* that the term flowering Ferns is usually applied, but there are others which may be included under the same heading, and though the title may not be strictly correct, the peculiarly distinct manner in which the fertile portion of the fronds is produced certainly gives the appearance of flower-spikes. The *Anemias*, though not of much use as market plants, should be found in all collections. Most of them may be raised from spores, which, if collected at the right time, germinate freely. When seedlings are plentiful they may be grown several together in a pot or pan. They should not be bunched up together, but put in singly at equal distances apart, say about six plants in an 8-inch pan, or one older plant with fertile fronds in the centre and some younger seedlings round. Compared with most Ferns they are short-lived, or if grown on they lose much of their beauty after they have made some fertile fronds and the basal ones die away. Many Ferns lose much of their beauty after they attain to a certain size. There are none more difficult to keep after the second or third year than the *Anemias*, which require stove treatment, a rough, open compost, and to be grown in moderately sized pots.

Anemia phyllitidis is the most useful, and this is grown to some extent for market, but only as quite small plants before the fertile fronds appear. The young fronds are of a fresh pea-green, and in the variety *fraxinifolia* the name is very appropriate, as they have much the colour and texture of Ash leaves.

A. ciliata has very woolly fronds. When well grown it is one of the prettiest, but it requires some care to establish good plants.

A. rotundifolia, which was re-introduced by Mr. Bull a few years ago, is one of the most distinct, the drooping pinnate fronds reminding one of *Adiantum lunulatum*. A young plant is produced from the caudate termination. The young fronds have a pretty bronzy brown tint. In the fertile fronds the two lower pinnae grow erect as in other

varieties. To grow this well the plants should be stood upon inverted pots or suspended. I have not yet raised seedlings, but it is easily propagated by rooting the young plants which are produced on the fronds.

A. Dregeana is a South African species of dwarf habit with a tufted crown. It makes a compact plant, and may be grown in a lower temperature.

A. villosa is another pretty form with very woolly fronds, and *A. adiantifolia* may be mentioned.

There are upwards of two dozen species besides varieties, but I doubt if there is half this number in cultivation at the present time.

I find in the Kew list of Ferns there are only six given, but they have no doubt added *A. rotundifolia*, which was not in commerce at the time the list was published. In the list from the Cambridge Botanic Garden only one is given—*A. phyllitidis*.

OSMUNDAS.—The most useful variety of these for pot culture is

O. palustris. It finds some favour as a market plant. In a small state it is very pretty, and when well grown makes a well furnished plant for a 4½-inch pot, and as it is fairly hardy and evergreen, it is useful for winter work. The young fronds have a bright bronzy red tint, which is most conspicuous in the stipes. This comes freely from spores, but these should be collected while they appear to be quite green. The true spores are green when ripe, and although the prothallia begin to grow in a few days after they are sown, it is some time before the first frond starts.

O. javanica is another evergreen species, having fronds of great substance. I have never known of a large batch of seedlings being raised of this; the only way I have been able to increase the stock has been by division, but this is a very slow process. I have sown spores on several occasions, but have had little success, a solitary seedling appearing here and there.

O. regalis (the Royal Fern).—This comes freely from spores if they are collected from well-matured plants. I have seen it grown in large batches for market, and in a 3-inch pot it is very pretty—that is, before the first young fronds die off. Being deciduous is somewhat of a drawback. It takes some years to establish the large specimens, such as are seen in their native habitats. This may be grown in any cool shady place either under glass or in the open, but it loves a moist atmosphere, and though it is deciduous, it should never be allowed to get quite dry at the roots.

O. gracilis, as imported from North America, is very pretty. It more nearly resembles *O. palustris*, but has broader fronds and is deciduous. I have never succeeded with spores of this or the other two species, *O. cinnamomea* and *O. Claytoniana*, which come from the same district, though it appears they come freely enough in their native habitats. Like our native Royal Fern, the North American species succeed best in moist, swampy districts, and I believe it is only from plants of advanced age that good spores are procurable. The imported clumps usually retain their vitality, and although the fronds do not go on increasing in size as do those on plants that are well established, there is little risk of losing them when properly cared for.

A. HEMSLEY.

Nephrolepis exaltata is an excellent Fern for dwelling-house work and will stand draughts well.—G. P.

Alsophila australis.—This does not make such a solid stem as the *Dicksonia*, but is of rapid growth. Seedlings soon grow into large plants. I have never succeeded in raising seedlings from home-saved spores, but imported spores have generally germinated well. With many of the large-growing Ferns it appears to be that it is only from large plants grown in an airy position that good spores are obtainable. This may be grown under the same conditions as the *Dicksonia*, but requires careful attention in regard to watering. Free-growing plants take up large quantities, and a little neglect will prove disastrous; the fronds shrivel up quickly and cannot be revived, but with care and a liberal supply of manure after they are well rooted they soon make grand plants with large, spreading fronds, and where plenty of room can be given, *Alsophila australis* is one of the most desirable Ferns that can be grown.—A. H.

Gleichenia circinata.—There is hardly a more elegant Fern in cultivation than this when allowed to grow a little naturally, but many people are not satisfied with it in this way, and

prefer to tie it in to balloon or other shaped trellises of wire. Looking round a garden in the neighbourhood recently, I saw a man busily engaged in tying and snipping at a fine plant—"to get it into shape a little," as he expressed it. The least of the harm done by this silly practice is to damage the tender young fronds, while the worst is the spoiling of a very beautiful plant. As a matter of fact, very few Ferns are more easily injured in the young stage than this, and in all cultural details there is need of great care. The rhizomes often push above the surface of the soil, and it is necessary to keep this in a somewhat loose and open condition, so that these may occasionally be pegged down. Where there is room for it, the compost may be added to by top-dressing with a little rough peaty soil, and this answers the same purpose. To support the fronds a few stakes may be placed in each pot—not straight deal ones, but thin branchy bits of Birch or a similar wood. They will be hidden entirely as the plants grow, the older fronds passing through them and preventing the whole plant falling about in an untidy manner.—H. R.

DICKSONIA ANTARCTICA.

THIS is the most useful of all the Tree Ferns. From young seedlings in 6-inch pots to the giant specimens which are established from imported stems it is always appreciated. One of the finest specimens I ever saw was a home-grown one; though the stem was not a great height, it was very thick. The treatment had a good deal to do with the size of the stem. It had been regularly supplied with a covering of Sphagnum Moss; this not only increased the size of stem by providing material for the roots, but also increased the strength and size of the fronds. Imported stems may be treated in this way with advantage, but the covering should not be too thick. A thin covering of quite fresh Sphagnum from the base of the stem up to the crown is sufficient, and by keeping it moist, but not saturated, the young roots will penetrate and the Moss itself will grow. With the imported stems care should be taken that they are not started in a high temperature, or they will make fronds quickly and exhaust their vitality before they have made new roots sufficient to sustain them. Although the stem should be kept moist, care should be taken not to wet the crown too much until the fronds have made a good start. It takes a long time to establish a stem of any size from home-raised seedlings, but very useful little plants may be had within a year of sowing the spores. The best spores are obtained from the large plants grown in a cool house. If taken at the right time and sown while quite fresh they germinate freely, but I have never succeeded with spores that have been kept for any time. Young plants may be grown on in an intermediate temperature. They should be potted in a compost consisting largely of fibrous peat with some leaf-mould, a little loam, and some sand. Plenty of drainage is essential, and until the plants are well established water should be given sparingly. After the pots are well filled with roots and while the plants are making new fronds clear liquid manure may be used freely.

A. H.

Sunlight for Ferns.—I quite agree with the remarks of "C. H." (p. 424) and A. Hemsley (p. 449) on this subject. I have a small intermediate house in which I grow a good many *Adiantums* fairly successfully, and the only shading used is a little whitening rubbed on the glass, and it is only when they are placed quite near the roof that such things as *Adiantum tinctum*, *A. tenerum*, *A. Farleyense*, *Davallia Tyermanni*, *Doodia aspera*, &c., show the lovely red and brown coloration in their young fronds, which is their distinctive charm. When it is desired to use Ferns for dwelling-house decoration I find it a great advantage to let them make their growth in a cool, airy house, such as an unheated vinery, rather than in a close, damp structure. The growth made in the latter is lovely to look

at, but the plant fades the moment it comes into a room, and the same applies to cut fronds. A very large number of *Adiantums*, especially those of the cuneatum and capillus-Veneris sections, make excellent growth in an unheated greenhouse in summer if slightly protected from the full blaze of the sun, as by a Vine on the roof, and, of course, well looked after as to water, but the plants should be put in before they commence to start, otherwise any growth made in the close house will surely be ruined.—G. P.

Pteris scaberula.—Either as a large specimen or a small one in a planted-out fernery or in pots anywhere, this is a delightful species. It always reminds me of the exquisite Killarney Fern, and is, I think, equally precious. The fronds rise from a creeping, wire-like rhizome and are finely cut and very elegant. Unfortunately, it is a difficult Fern to grow, and especially to propagate. It was one of a collection of large exhibition Ferns I had under my charge some years ago, and I tried it in various temperatures, but it was nowhere so satisfactory as in a cold, damp vinery from which frost was just excluded, but which was useless for growing Grapes in. Here *P. scaberula* grew and increased, and the largest plant was in a pan that, judging from memory, must have been at least a yard across, while the rhizomes that grew outside would have made the plant considerably larger. When in full health it must have been well over 4 feet across. Although large plants are useful for exhibition, they are not so pretty as are medium-sized ones in baskets or pans. Propagation, as hinted above, is difficult, and the most likely method to succeed is to wait until the new growths are just starting and endeavour to lift out pieces of the plant with roots and soil attached. For compost it likes something free and open, with plenty of leaf-mould and sharp sand.—H.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

DECEMBER 19.

IN extent the meeting of last Tuesday was no doubt the smallest held during the current year. Being so near upon the Christmas season, this is not to be wondered at in the least. What was lacking in quantity was fully atoned for by the exhibits of Orchids, not groups, it is true, but of rarities and new hybrids, which were beyond the average in quality. Two good exhibits of Apples were staged, one by the trade and another from a private source. Several seedling Apples were presented to the fruit committee, one at least of these obtaining an award of merit. The attendance of gardeners was remarkably good, the meeting being in no sense a dull one. As a suggestion is not out of place, the hint is given that at such a meeting collections of berry-bearing plants would have been most appropriate.

Orchid Committee.

First-class certificates were awarded to the following:—

DENDROBIUM SPECTABILE.—This is one of the most distinct and beautiful of the *D. macrophyllum* group. It has been known to botanists for nearly half a century, but it has only been of recent years that plants have been introduced to this country alive. There are now several places in England where plants have been showing bloom for some months; consequently, there has been considerable excitement as to who should be the first to exhibit the plant in flower. This has fallen to the good fortune of Major Joicey, of Sunningdale Park, Berks. The sepals and petals are each about 2 inches long, the sepals half an inch broad at the base, tapering towards the apex. The ground colour internally is buff-yellow, lined and marbled with reddish brown, the petals smaller and much twisted, similar in colour to the sepals. The exterior of both the sepals and petals is pale yellow. The front lobe of the lip is

twisted, white, heavily veined and suffused with deep violet-purple, becoming less coloured towards the base. The winged side lobes are white, closely reticulated with small violet-purple veins. At the base there are three raised white ridges. In the habit of growth it resembles *D. Johnsoniae* and other members of this section. It is a native of New Guinea and the Solomon Islands, and is a most desirable addition to this section of *Dendrobiums*.

CYPRIPEDIUM LORD ROBERTS (*Charlesworthi* × *Creon*).—This is by far the best of the *C. Charlesworthi* hybrids that have yet appeared. The dorsal sepal is $2\frac{1}{2}$ inches across, white at the top, slightly tinted with rose, becoming suffused with rose-purple and veined with a darker shade of purple towards the base. The highly polished petals are each about 2 inches long, deep purple, suffused with a darker shade of purple on the upper half, where it is also highly polished. The lip is brown, shading to green at the base, the column bright rose. The lower sepal is pale green streaked with purple. From Messrs. J. Charlesworth and Co., Bradford, Yorks.

CYPRIPEDIUM HERA EURYADES VAR. SPLENDENS (*Leeanum* × *Boxalli*).—This is a distinct and beautiful form. The dorsal sepal is $2\frac{1}{2}$ inches across, white, suffused with deep rose-purple through the central area. At the base there is a small area of green with brown spottings. The petals are very broad, deep brown, highly polished and mottled with green; the lip deep brown, shading to pale green. The flowers are quite distinct from those of the variety certificated at the last meeting. From Messrs. J. Veitch and Sons, Royal Exotic Nurseries, King's Road, Chelsea.

Awards of merit were adjudged to the following:—

CYPRIPEDIUM CONCO CALLOSUM.—This has the intermediate characteristics of the species indicated in the name. The dorsal sepal is 2 inches across, delicately suffused with rose, with some yellow and green at the base. The petals are pale green, suffused with rose and thickly covered with minute purple spots. A cut raceme was sent from the collection of Mr. G. W. Law-Schofield, New Hall Hey, Rawtenstall.

ZYGO-COLAX AMESIANA (*Zygopetalum brachypetalum* × *Celax jugosus*).—This is a most distinct and desirable hybrid, having the intermediate characteristics of the parent species. The sepals and petals are green, thickly covered with deep brown spots; the lip white, lined and spotted with deep blue. Two plants came from the nurseries of Messrs. F. Sander and Co., St. Albans.

LÆLIO CATTLEYA WELLSIANA IGNESCENS (*Triabæ* × *purpurata*).—In this the sepals and petals are of fine form and substance, deep rosy lilac, the large lip rich velvety crimson, shading to yellow through the throat. A plant carrying a two-flowered raceme came from the nurseries of Messrs. J. Veitch and Sons.

CATTLEYA ELATOR (*C. Schilleriana* × *C. Mossiae Reineckiana*).—The sepals and petals are white, faintly tinted with rose, the front lobe of the lip light rose, shading to crimson in the centre, the side lobes rose, shading to yellow, spotted with purple at the base. The plant carried a two-flowered raceme. From Mr. C. L. N. Ingram, Elstead, Godalming.

Mr. W. M. Appleton, Weston-super-Mare, was awarded a silver Banksian medal for a small group consisting of four distinct varieties of *C. insignis*. One of the most curious and interesting was *C. i. Oddity*, with malformed flowers, in which the petals form two extra labellums, giving a remarkably quaint effect. The plant carried five flowers, which have retained their characters for several years. *C. i. Macfarlanei* is a distinct form with a deep brown suffusion on the dorsal sepal. *C. Morteni* (*Chamberlainianum* × *Leeanum Masereelianum*) is a beautiful variety, the dorsal sepal white, suffused with green, and spotted with brown through the central area, the petals green, suffused with purple and spotted with deep brown, the lip rosy purple, highly polished. A

lovely variety of *Lælio-Cattleya intermedio-flava*, bearing two racemes of six flowers each, the sepals and petals bright yellow, the lip purple, shading to creamy yellow, was also included. Major Jeacey sent a finely-flowered plant of *Dendrobium atro-violaceum* and a lovely spike of the white and purple *D. Johnsoniae*. M. Jules Hye, Lysen, Ghent, sent *Cypridium* Mme. Jules Hye (*C. Spicerianum* × *C. tonsum*), in which the intermediate characteristics of the species were combined. Mr. J. Gurney Fowler, South Woodford, sent *Cypridium* *insigne* *Fowlerianum*, a variety with a finely spotted dorsal sepal. Mr. Reg. Young, Liverpool, showed a good form of *C. Mines* and numerous other hybrid *Cypridiums*. Mr. J. T. Bennett-Poë, Cheshunt, had a fine cut spike of *Oncidium tigrinum* and a good form of *Lælia anceps*. Messrs. H. Low and Co. sent *Cypridium* *William Lloyd* and a *C. venustum* hybrid. Messrs. J. Charlesworth and Co., Heaton, Bradford, sent a grand plant of *Cypridium* *insigne* *Sanderæ* with sixteen growths and six flowers, which were remarkable for size and substance. This is by far the finest specimen of this lovely *Cypridium* we have seen.

At the commencement of the business of the Orchid committee, Mr. J. O'Brien, in the absence of Mr. H. J. Veitch, drew attention to another sad loss the committee had sustained since the last meeting by the death of Mr. A. Outram. Mr. O'Brien dwelt on the many useful services Mr. Outram had rendered to horticulture both in England and America. The committee desired that their deepest sympathy should be conveyed to the bereaved wife and family.

Floral Committee.

No award was made to any novelty before this committee, while the exhibits may be described as among the smallest ever seen at the Drill Hall. The only group of plants shown was composed entirely of *Chrysanthemums* from Messrs. W. Wells and Co., Earlswood, Redhill. This was largely made up of a good late dwarf white named *Letrier*, the plants being in pots and barely 4 feet high. That the variety possesses the merit of lateness there is no doubt, but *Niveum* is also a good white and may be had in fairly passable condition into January. Mention of *Niveum*, indeed, almost suggests the parentage of *Letrier*, which appears intermediate between it and *L. Canning*. *Letrier*, however, has the blooms well filled to the centre, is of good bushy habit, and in some isolated plants we noted many blooms of which hardly a petal was unfolded. Besides this there were cut specimens of *Golden Good Gracious*, *Mermaid*, white, an Australian kind; *Cheveux d'Or*, of the thread or spidery section; *Sunset*, a fine gold and red-orange shade; a beautiful yellow sport of *Princess Victoria*, of which a solitary bloom was shown; Mrs. J. Thompson, a good white; Dr. Basse, a distinct shade of violet-amaranth, and withal violet scented. Other kinds noted were *Alice Carter*, King of Plumes, *Bouquetiere*, white and rose, and *Sam Caswell*, pink, these last belonging to the so-called spidery section. Some good flowers of Mrs. C. Bown, a capital white, were also shown, making a really pleasing and telling lot for so late a date. All the cut flowers were quite fresh. A silver Banksian medal was awarded. From Messrs. Clibran & Sons, Altrincham, Cheshire, came three or four varieties of single *Chrysanthemums*, including *Lord Methuen*, white; *Lord Roberts*, bronze, almost a single form of *Tuxedo*; *Earlswood Beauty*, white; and *Miss Moffatt*, white. It was not possible to form any correct idea of these, as their beauty and freshness had long since passed. Messrs. Veitch and Sons, Ltd., Chelsea, had a stand of their well-known hybrid *Rhododendrons*, of which *Rose Perfection*; *Princess Alexandra*, white; *Cloth of Gold*, a deep shade of canary-yellow, exquisitely soft and pleasing, and large, handsome blossoms; *Exquisite*, rich golden, a most superb variety, surpassing all else in this way; *Amabile*, flesh; *Maiden's Blush*; the intensely coloured *Malayan* kind

Little Beauty, and *Balsaminiflorum aurcum*, a double form, being among the most striking. It speaks volumes for the perpetual flowering character of these plants that the Messrs. Veitch are in a position to show them so frequently and in such numbers. The Earl of Ancaster, Normanton, near Stamford (gardener, Mr. J. Butler), exhibited some capital growths of *Lygodium scandens*, the longest being upwards of 16 feet in length. These excellent examples, while in a marked degree displaying the true character of the species, were also noteworthy for the abundance of fertile fronds, fertility being greatest in the uppermost part of growth. Very interesting, too, was the way in which these fertile fronds graduated till the quite barren and much less beautiful fronds were reached on the lower half of the growth. These entire growths are deemed of especial value in decoration. A large flowering spray several feet in length of *Acacia dealbata* was also shown, and may safely be regarded as among the showiest of this somewhat numerous race of greenhouse shrubs.

Fruit Committee.

On this occasion the exhibits before this body, limited as they were, really exceeded those before the other committees, but were chiefly of Apples and a fine collection of Grapes.

An award of merit was given to—

APPLE STANWAY SEEDLING.—A handsome medium-sized conical fruit not unlike *Royal Jubilee* or a good *Golden Spire*. It was shown by Mr. F. H. Kettle, King's Road, Colchester.

A fine collection of sixteen bunches of Grapes came from Mr. C. Bayer, Forest Hill (gardener, Mr. Taylor), including *Muscat of Alexandria*, very good samples; Mrs. Pearson, a large 6-lb. cluster, but showing the brown tinge characteristic of the variety; and two nice clusters of *Trebbiano*. The black varieties were: *Alicante*, well-finished clusters; *Gros Colman*, very fine berries; Mrs. Pince's *Black Muscat*, *Gros Guillaume*, and *Lady Downe's*, the last three in bunches of moderate dimensions, but good for the time of year (silver-gilt Knightian medal). The Earl of Ancaster, Normanton, Stamford (gardener, Mr. J. Butler), staged a collection of sixty dishes of Apples and twenty of Potatoes in variety, the samples in each case being of moderate quality. His finest Apples were *Peasgood's Nonsuch*, *Prince Albert*, *Mère de Ménage*, *Lord Derby*, *Beauty of Kent*, *The Queen*, *Alfriston*, *Warner's King*, *Newton Wonder*, *Bismarck*, *Barnack Beauty*, *Cox's Orange Pippin*, *Wyken Pippin*, *Stirling Castle*, *Blenheim Pippin*, *New Hawthornden*, *Ecklinville Seedling*, &c. The Potatoes comprised several seedlings, also *Sutton's Ideal*, *Ninety-fold*, *Triumph*, *Satisfaction* and *Windsor Castle*, with *White* and *Pink Beauty of Hebron*, *Syen House Prolific*, *The Bruce*, *British Queen* and others (silver Banksian medal). From Messrs. J. Cheal and Sons, Crawley, Sussex, came a nice clean collection of eighty dishes of Apples, none large, but all in good preservation. The finest samples were *Newton Wonder*, very handsome; *Gloria Mundi*, *Annie Elizabeth*, *Prince Albert*, *Waltham Abbey Seedling*, *Bismarck*, *Lord Derby*, *Chelmsford Wonder*, *Golden Noble*, *Lerinka*, semi-conical, of rich appearance; *Schoolmaster* and *Beauty of Kent*. *Gospatrie*, *Kruger*, *Bess Peel*, *Castle Major*, *Hormead's Pearmain*, *Mabbot's Pearmain*, *Hoary Morning*, *Duke of Devonshire*, *Golden Reinette*, *Paroquet*, one of Mr. C. Ross's new ones; *Fearn's Pippin*, *Dutch Mignonne*, *Seaton House*, *Winter Queening*, *Cox's Orange Pippin* and *Mannington Pearmain* were excellent (silver-gilt Banksian). Mr. W. E. Parsens, Egham, Surrey, sent *Apple Brothier*, not unlike *Manks Codlin* in form and flesh. *Lord Ducie*, *Tortworth Court*, again sent fine rich-coloured fruits of the Japanese *Diospyros Kaki*, some of which were, if very pulpy, yet pleasantly flavoured. Mr. C. Ross, gardener to Captain Carstairs, Welford Park, Newbury, sent seedling Apples *Miss Annie*, from *Golden Reinette* × *Lane's Prince Albert*, slightly conical and of nice

appearance; Elsie, from Peasgood's Nonsuch x Duke of Devonshire, pretty round form; and Berks Russet, small, round, highly coloured, not unlike Ross Nonpareil, but flesh firmer and better flavoured. The last, a nice, promising fruit, was asked to be seen again next year after another season's growth. Mr. Ross also showed a fine richly coloured sample of the old Northern Greening, in this instance far superior to the new Northern Greening.

National Auricula and Primula Society (Southern Section).—The annual general meeting of the above society took place on Wednesday, December 13, in the Horticultural Club Room, Hotel Windsor, Victoria Street. The statement of the hon. sec. disclosed a very satisfactory state of affairs, sixteen new members having joined during the year, as against the loss by death and otherwise of six. The amount received in subscriptions during the year was £75 7s. 6d., and the amount paid in prize money at the late exhibition held in conjunction with the Royal Horticultural Society at the Drill Hall, Westminster, in April last £56 17s. The balance carried forward to the year 1900 is £20 18s. 9d. It was decided to hold the exhibition for 1900 on Tuesday, April 24, at the Drill Hall, Westminster, under the auspices of the Royal Horticultural Society, a very liberal list of prizes being offered for show Auriculas, alpine Auriculas, Primulas, Polyanthus, and Primroses. The hon. sec. is Mr. T. E. Henwood, 16, Hamilton Road, Reading.

National Carnation and Picotee Society (Southern Section).—The annual general meeting of the above society took place on Wednesday, December 13, in the Horticultural Club Room, Hotel Windsor, Victoria Street, the president of the society (Mr. Martin R. Smith) and a large muster of members being present. The hon. sec. and treasurer reported a very satisfactory state of affairs. Forty-five new members have joined the society during the year, a number considerably in excess of those lost to the society by death and otherwise. Subscriptions received during the year amounted to £301 3s. 6d.; prize money paid at the late exhibition of the society, held at the Crystal Palace in July last, £228 0s. 6d., in addition to three silver cups presented by the president. A balance of £229 11s. 10d. was carried forward to the year 1900. The society now numbers nearly 400 members. It was decided to hold the annual exhibition for 1900 at the Crystal Palace in July next. Several new classes were added to the schedule, and it was also decided to offer a silver cup to the exhibitor gaining most points in the undressed classes as a further encouragement to the amateur members. The sum now offered in prize money amounts to close upon £300, and a silver cup in addition to the three silver cups presented by the president. It was also decided to publish in the forthcoming report a list of flowers that can be shown as yellow ground Picotees and another list for yellow ground fancies, much doubt having hitherto been felt as to which class some of the varieties should be shown in. A packet of choice Carnation seed is sent to all subscribers of 10s. per annum and upwards. This seed is saved from the unique collection of the president, and generously presented by him to the society. The hon. sec. of the society is Mr. T. E. Henwood, 16, Hamilton Road, Reading.

National Chrysanthemum Society.—A meeting of the committee was held at Carr's Restaurant, Strand, W.C., on Monday evening last. In the absence of the chairman, Mr. Thomas Bevan, vice-chairman, presided. After the minutes had been read and confirmed, the secretary referred to the loss sustained by the committee in the death of their colleague, Mr. Alfred Outram. On the motion of Mr. J. Moorman, seconded by Mr. Newell, the secretary was requested to write a letter expressing the committee's deepest sympathy and condolence with Mrs. Outram and family. The secretary announced that at the annual dinner, held on the 14th inst., 112 sat

down. Fruits and flowers sent by friends were duly acknowledged. Mr. A. Taylor's epitome of blooms exhibited at the November show was then read as follows: Blooms, Japanese, 2241; incurved, 618; Anemone flowered, 240; Anemone pompons, 48; pompons, 84; reflexed, 36; and singles, 42, making a grand total of 3309 blooms. In the case of pompons and singles, a bunch of three blooms was counted as one bloom. A vote of thanks to the compiler of these figures was passed. Mr. W. H. Lees wrote wishing to resign his position on the committee at the close of the year. The dinner account after some discussion was passed for payment. The amendments to rules affecting affiliated societies, passed at a recent meeting of the committee, were then read. These will be presented for confirmation at the annual general meeting. The meeting of the classification committee was then fixed for Wednesday, January 3, at 6 o'clock. Mr. Sturrock was elected to fill the vacancy on the schedule committee, caused by the death of Mr. Outram, this committee arranging to commence their labours at the conclusion of the classification committee meeting on the 3rd prox. Reference was made to the reserve fund, which had been but slightly increased during the past year. Three new members were elected.

NOTES OF THE WEEK.

Chrysanthemum Winter White.—This is the name of a very good and dwarf white for December work, a fact that was amply illustrated by some nice bushes of it at the recent Aquarium show. It is evidently a good variety for bush plants, and those requiring a dwarf plant of not more than 3 feet—the plants shown were under this—should make a note of this one.

Rhododendron Princess Royal.—Among the newer hybrids of which javanicum and jasminoides are the original parents this forms a pleasing variety in the pink shades at least. Not only is it useful as a winter-flowering kind, but being also somewhat free-flowering maintains a more or less constant supply of its valuable trusses of bloom through the autumn and winter season. A capital companion to it, though of different tone of colouring, is Rose Perfection.

Plumbago capensis alba.—Pleasing as is the blue form of the above popular plant, the above is very chaste and beautiful also. Given more or less freedom for branching and a not too great a root run, this white form may frequently be had in fair quantity over a long season, and when it is desired to carry its flowering on into the winter months, a variety of plants in pots will often meet the wants of the case. Warm greenhouse treatment suits it best, and if only a few trusses are forthcoming, these will be welcome and of much value.

Euphorbia fulgens (E. jacquiniiflora).—Few of the more tropical-flowering plants of midwinter are more serviceable than this, and very few so attractive. The large handsome sprays are, perhaps, most conspicuous when the plants have been allowed to develop long arching racemes of its floral bracts, that surpass in brilliancy any other of its genus or, indeed, any other of the many winter-flowering plants. The flowers also last well when grown moderately cool. It is a good plan to plant four or six rooted cuttings of equal strength in a 6-inch pot and grow without stopping. In this way long racemes are secured and an effect not readily surpassed.

Chrysanthemum Mme. C. Desgranges.—It is curious as well as interesting to note the various ways in which the above is rendered in different catalogues of the flower, and more than once it has occurred to me that while there is undoubtedly a right and proper rendering of the name, this at least should and would carry sway if once an authoritative statement of the correct way was given. At times it is seen in its full array thus, Mme. Castex Desgranges, another rendering is Mme. des Grange, while another slight variation is Mme. C. Desgrange. There may be other variations, but these occur to me at the moment.—E. J.

*. In the National Society's catalogue it is given as Mme. Castex Desgranges.—Eo.

Salvia splendens grandiflora.—Those only who know this handsome Sage as a dazzling summer-flowering subject should lose no time in

growing it also for winter flowering. It simply requires a little later stopping and retarding generally to secure a good display through late autumn and often to the end of the year. Indeed, late propagated plants of the original form may quite easily be kept thus late, and with the huge gap that is rendered necessary by the clearing out of the Chrysanthemums, such plants as may be kept over become doubly useful. In the dull days of winter the rich scarlet flowers are most telling.

Agave Woodrowi.—It is seldom that any species or form of the Agave presents any particularly striking features in its leafage. This kind, however, is not only an exception, but a remarkable one, presenting features that are bound to attract attention. The most striking characteristic of this kind is the milk-white variegation which is so prominent and so well sustained in the plant. Usually when this sort of variegation occurs in any plant it is marked by weakness or a more or less sickly nature. In the above plant, however, there is no apparent sign of any inherent weakness, and the plant is therefore of value. A nice example of this well-marked form is in the large succulent house at Kew.

Senecio macroglossus.—Innumerable as are the species of Groundsel, those of climbing habit are certainly in the minority, and the above is at least one, if not a unique one. It is, too, a capital winter flowering greenhouse plant that requires but little special treatment beyond a fairly free root-run and plenty of moisture at the root during active growth. This freedom of root space is needful for the free growth of the plant, without which its flower-heads will be few and far between. The ray florets are of a distinct buff yellow shade, more yellow than buff certainly, yet of a combined character that is not readily asserted. When growth is free, the glossy, Ivy-looking character of the foliage renders it most distinct and pleasing. It is a native of South Africa.

Chrysanthemum Princess Victoria (yellow variety).—While seedlings of the Chrysanthemum naturally produce some of the most beautiful and useful flowers, it frequently happens that to their sportive character also are we indebted for many things equally valuable. The above sport is an instance in point, the original kind being dwarf, free, and late in flowering, and, though not of exhibition size, is undoubtedly of more value by reason of its decorative character only. What is true of the white kind, now so well known, will be equally so of its yellow sport, of which we have so far seen but a solitary bloom. The shade of yellow is a deep one, and its value is thereby enhanced, as the paler shades of yellow deteriorate under artificial light to such an extent that it is not always possible to distinguish pale yellow shades from poor whites or the more creamy shades.

Bouvardia odorata alba.—This beautiful and useful winter flower is all that is implied in its specific and varietal name, and is certainly one of the most charming of all Bouvardias for pots. The blossoms, as indeed the foliage also, are allied to the Jasmine-flowered type of these plants. It is a bushy and free-habited kind, the blossoms pure white on the one surface, the reverse of a pinkish hue and nearly 2 inches long. These shorter-tubed varieties are less likely to fall over and almost break in the bending, as is often the case with the Humboldt varieties, though perhaps less so in the case of B. H. grandiflora, the latest addition to these plants. For freedom of flowering, the above and Parity, a perfectly white flower of the odorata type, are worth every attention. Very rarely are these Bouvardias grown to perfection in small lots, and once insects secure the upper hand, the stake hole fire is at once the shortest and safest all-round cure.

Helleborus altifolius (giant Christmas Rose).—Though naturally a rather early kind to flower, frequently in mid-November or somewhat later, this handsome kind is even now in excellent condition. Many of its blossoms are exceptionally fine, and on their fine bold stems are both beautiful, handsome, and picturesque at this usually

gloomy season of the year. Of the value of the plant there is little doubt, and scarcely two opinions of its merit as a garden flower or a garden ornament exist. But it is worth noting, and it is worth repeating with even greater emphasis, that it should be regarded in the light of a garden plant, that its flowers should be valued from the garden standpoint, and not ruthlessly cut and forgotten the moment the blossoms are expanded. Above all things, avoid cutting and trimming its foliage; rather suffer a dead-looking leaf to remain than cut it away, and with it so many inches of good stem that quickly dies to the crown and often carries disease thither.

The conference mania.—The note in last week's issue of *THE GARDEN* respecting the proposed conference on Sweet Peas for the purpose of classifying the varieties into groups of colour and form is most opportune, and should have the effect of exposing the absurd notion that such a conference is necessary. Regarding the form of Sweet Pea flowers, surely there is little variation in the many sorts to call for the adjudication by a body of admirers and growers, and anyone interested in the flower may find all the variation in colour he may need by confining his selection to a few varieties. Such a conference is quite unnecessary. If it is considered necessary, then by all means let the Royal Horticultural Society take the matter in hand, and also let them have a thoroughly representative trial of catalogued varieties. This would have the effect—and, after all, the only good effect—of bringing into prominence the large number of synonymous sorts.—A GROWER.

* * A trial has already been made by the Royal Horticultural Society of the then known forms of Sweet Peas.—ED.

Abelia uniflora.—Bushes of this pretty plant when freely grown are among the more acceptable things that may be well flowered in comparatively cool structures. In the cool conservatory, for example, where frequent opportunity is afforded for planting out in good soil, the above is not only a neat, but a most desirable subject, and when in flower, when a faint rose tint is added to the white that predominates in the prettily formed flowers—and a good bush is laden with a profusion of the same—the effect is pleasing. Happily, too, it is one of those beautiful ornaments of the greenhouse that may well escape the never-ending demands of the cut-flower merchant, and in this way all its pleasing beauty and profusion of flowering may long be enjoyed. The plant is not difficult to cultivate, and in equal parts of peat and loam, with sand added, is usually a success. It is worth noting, however, that planting out is far better for its ultimate success than retaining it in a pot, the small amount of soil soon becoming exhausted in such. The plant is quickly sensible of the loss, and shabby plants not infrequently result.

Mr. Harpur-Crewe's double Wallflower.—While the blooming of Wallflowers in autumn and winter is a frequent occurrence, the habit of this double variety to do so seems more pronounced than that of most others. This is no mean advantage, as flowers in the open are by no means so plentiful at the end of November and the beginning (or for that matter the end) of December that we can afford to neglect the few that bloom. Thus I do not think that a reference to the Rev. Harpur-Crewe's double Wallflower will be either unwelcome or unseasonable. Those who do not know it must not picture a plant with the habit of the German double Wallflowers, whose crowded spikes of bloom give quite a different appearance. The one under notice is more perennial in its habit, is taller than they, and has shorter spikes of round, ball shaped yellow flowers. It never seeds and must be propagated from cuttings. These are easily obtained from the side growths, which are produced with comparative freedom. Annual propagation is not necessary, although it ought to be practised so that a reserve may be at hand in case of a hard winter carrying off the old plants. I

should be glad to know from anyone how this Wallflower came to be called "Mr. Harpur-Crewe's." I believe that it has been in cultivation for a very long time.—S. ARNOTT.

Colchicum Sibthorpi.—Established clumps of this are still flowering freely here, and have been doing so for six weeks or more. Some of the deeply coloured forms are very fine. The freest-flowering, and I am almost tempted to say the handsomest of them all, is *C. Bisignani*. Each bulb was a perfect bouquet, the colour soft and lovely. What will probably be a drawback, except in very mild localities, is its habit of sending up its leaves immediately after flowering. They are nearly fully developed now, and if hard weather should ensue, are likely to be injured. The most distinct in flower now is *C. Ritschi*, a shapely pure white flower just held up above the partly-developed deep green leaves, which form a sort of cup below them. *C. bulbocodioides* is now a mass of deep rosy blossoms amongst the leaves, the whole only about 3 inches high. A most elegant species is *C. polyphyllum*, with fair sized soft blush-pink flowers, the segments of which are narrow and strap-like, and curl about in the most charming way. It has been in flower for several weeks and is still quite fresh. *Crocus vitellinus* forms just now bright patches of a fiery orange-yellow.—T. SMITH, *Neurby*.

Sedum brevifolium var. *Pottsi*.—From a note kindly sent me by Mr. E. C. Buxton, I fear that I may have led some readers to think that I intended to recommend the use of *Sedum brevifolium* var. *Pottsi* as a carpeting plant. I must admit that a perusal of my note might easily give that impression, although I merely intended to imply that it was the reference in *THE GARDEN* to the other *Sedums* which recalled this *Stonecrop* to my mind. I hasten, therefore, to make it clear that it was not meant to suggest that it was a suitable plant for carpeting. While one regrets some obscurity of language in writing of this pretty little *Stonecrop*, the regret is not unmingled with an opposite feeling, inasmuch as it has drawn from Mr. Buxton some valuable information regarding the needs of a somewhat difficult subject. In his garden it likes to rest entirely on rocks. On one which is very hot and dry in summer it grows very dwarf and in small tufts. On the face of another rock where there are some deep natural fissures it grows 2 inches high, but pieces which fall to the ground and root do little or no good. Mr. Buxton is always so willing to assist others who care for flowers, that I know he will allow me to give others the information he has so kindly sent me. *Sedum brevifolium* *Pottsi* has so long been a favourite with me, that I feel grateful for any hints which will enable it to be grown where it has not done well in the past.—S. ARNOTT.

THE WEATHER IN WILTS.

THE season, indeed the whole year, has been a most remarkable one in many respects, but, speaking more especially of the autumn, this has been most favourable from a gardener's point of view in its relation to outdoor work, mild weather and the attendant wealth of outdoor flowers both in and out of season. I was able to gather very nice fresh Rosebuds until the first week in December, which is most unusual. Chrysanthemums, too, outdoors have been abundant and very good, so much so that growers for the market found them of much less value than is usually the case. Until quite recently Dahlias and Sweet Peas were frequently mentioned, and in my own case they flowered later than I remember them before. Other flowers, too, have been continuous and late, and some, although not necessary or useful because of other seasonable flowers being plentiful, are interesting. In the fruit garden the pruning, nailing, and cleaning of bush fruits have proceeded without much hindrance, and the advantage of pressing forward this class of work is distinctly felt when the change to colder weather sets in. It was unnecessary to

place pot-grown Strawberries under cover until the first week in December; the mildness of the season and freedom from drenching rains were sufficient justification for their remaining outdoors. Neither Rhubarb nor Seakale forced well in their early batches for the same reason, and Asparagus recently lifted for forcing displayed signs of unusual activity in the crowns for the time of year. Some shoots had extended to over an inch where the crowns were situated near the surface, and which, it may be said, for the middle of December is of most unusual occurrence. Cauliflowers and early kinds of Broccoli have been plentiful and very good, as also were full-hearted Lettuce and Eodive from the open ground.

This wealth of unseasonable vegetation now suffers a reverse, frost varying in intensity up to 20°, accompanied by snow, having been lately recorded. The past mildness makes this severe touch of winter keenly felt in every department, and a continuance will make tender vegetables and salad outdoors scarce; those not of tender nature are rendered so by their continuous late growth. In many gardens the summer's drought accounts for a short supply for the present and future requirements of some crops in particular, and to such the severity of the weather change will be most inopportune. The summer, from a vegetable grower's point of view, was one of the worst for many years; seed-sowing and planting were most difficult, more particularly where water was short, and thus the winter's supply is restricted and rendered more so by the present weather.

Wills.

W. S.

The weather in west Herts.—The present cold period has now (20th) lasted thirteen days. On three days the temperature in shade at no time rose above the freezing point, and on five consecutive nights the thermometer exposed on the surface of the snow indicated from 15° to 27° of frost. The reading last mentioned, which was registered on the night preceding the 14th, is the lowest with one exception (December 22, 1890) that I have yet recorded here in December during the fourteen years over which my observations at Berkhamsted extend. At 2 feet deep the ground is now about 2° and at 1 foot deep about 3° colder than is seasonable. On the 13th the ground was covered with snow to the average depth of 1½ inches. This covering gradually diminished, until by the 18th it had been reduced to half an inch, and on the following day almost entirely disappeared. On nine of the last fifteen days no sunshine at all was recorded. The 18th was singularly calm, the mean rate of movement of the atmosphere at 30 feet above the ground being considerably less than a mile an hour. The last Rose bloom of the year was destroyed by frost on the 14th, which is five days later than the average date of its destruction in the previous fourteen years, but seventeen days earlier than last year.—E. M., *Berkhamsted*.

Public commons and footpaths.—A meeting of the executive committee of the Commons and Footpaths Preservation Society was held at 1, Great College Street, Westminster, on Friday, Mr. G. J. Shaw Lefevre presiding. The preliminary report of the secretary, Mr. Lawrence W. Chubb, on the provisions of private Bills to be introduced into Parliament in the coming session showed that power is sought in thirty-five Bills to appropriate common land and open spaces, or to extinguish rights of way. Over 3000 acres of open space will be extinguished in the coming session unless satisfactory terms for the protection of public interests are obtained. On the other hand, no fewer than thirteen local authorities are seeking power to enable the purchase or improvement of open spaces to be effected.

BOOKS RECEIVED.

Official Catalogue of the National Rose Society. To be had of the secretaries.

THE GARDEN.

No. 1467.—VOL. LVI.]

[DECEMBER 30, 1899.

INDEX.

(Illustrations in Italics.)

Orchard and Fruit:—

Apple Cornish Gilliflower ..	512
Apple Cox's Orange Pippin ..	514
Apple Gascoigne's Scarlet ..	514
Apple Margil	512
Apple trees, bush	511
Apples, Pearmain	512
Figs in pots	514
Grape Lady Hutt	514
Grape White Tokay	514
Grapes Gros Colman and Gros Maroc	513
Peach trees, unailing ..	513
Peaches, aspect for ..	513
Pear Bergamote d'Esperen ..	514
Pear Beurre Bosc	514
Pear Glou Morceau	513
Pear Zephiria Grogire ..	514
Pears keeping badly	513
Pears ripening prematurely ..	513
Pears, stewing	512
Trees purchased at markets ..	512

Strawberries for early forcing 512

Stove and Greenhouse:—

Eucharis amzonica	515
Euphorbia jacquicæflora ..	515
Lilies, potting	515
Orangeries, the	515
Orangeries, an old, in Kew Gardens	516
Orangeries, the, at Holme Lacy ..	515
Plants, pot, watering	516

Garden Flora:—

Peaches, double-flowered ..	516
-----------------------------	-----

Week's Work:—

Fruits, outdoor, work among ..	517
Kitchen garden, work in the ..	518

Flower:—

Arundo conspicua	519
--------------------------	-----

Carton, Ireland, notes from, in November	519
Conference mania, the	519
Rockets, the double	518
Tbladisantha dubia	518
<i>Thladiantha dubia</i> in the Cambridge Botanic Gardens ..	518

Trees and Shrubs:—

Greenwich Park, trees in ..	519
Trees and shrubs certificated in 1899	520
Trees and shrubs, evergreen ..	520

Chrysanthemums:—

Chrysanthemum Miss Alice Byron	522
Chrysanthemum Mme. R. Cadbury	521
Chrysanthemums, hardier ..	521

Chrysanthemums, Christ. mas 521

Chrysanthemums, new .. 521

Orchids:—

Cattleya Percivaliana	522
Cœlogyne Gardneriana ..	522
Miltonias, natural hybrid (western section)	522
Orchids, temperatures for ..	522
Vanda Amesiana	522

Roses:—

Roses from cuttings and layers	523
--	-----

Notes of the Week:—

Acacia penninervis	523
Chrysanthemum Letrier ..	523

Chrysanthemum Mrs. J. Thompson	524
Chrysanthemum Owen's Brillant	523
Chrysanthemums, two indispensable	524
Epimediums	524
Fuchsia pumila	524
Gaultheria procumbens ..	524
Malvastrum Gilliesi	524
Primula Reading Blue ..	523
Reinwardtia trigyna	524
Rhipsalis cassytha	523
Woodwardia radicans	524

Miscellaneous:—

Christmas decorations	522
Ferns, potting, loosely	523
Leaves as protection	517
Lerot, the	524

*I*T is with much regret that I now bid good-bye to the readers and contributors of "The Garden," which with the new year passes into other hands. Ever since its first year the paper has had the sympathy and support of garden lovers blest with fullest opportunities of practising the art; and not even the fierce competition of the cheaper press has lessened their number. From what I know of those who are to have the care of its columns in the days to come, its readers will have good reason to give it the same support as they have given during the many happy and busy years it has been in my hands. The new directors are able and willing to do full justice to "The Garden," and to give more time and thought to the business work of the paper than the growing needs of the "English Flower Garden" and other cares have of late allowed me to do.

The first volume of "The Garden" was dedicated to the memory of a man, J. C. Loudon, who left us a precious possession of books worthy of the art. The 56th volume is dedicated to that of Henry de Vilmorin, one lately among us in the prime of life, and his great loss calls to mind that of many others who have written in its pages or in some way aided and encouraged it: Robert Marnock, J. C. Niven, James Veitch, James McNab, Noel Humphreys, Anthony Waterer, Stuart Low, Frank Miles, David Moore, James Backhouse,

J. F. Meston, Richard Gilbert, the Rev. H. T. Ellacombe, J. McHutcheon, and T. W. Girdlestone.

To these and to many more of the long-lived race of good gardeners who are still alive—among them being Miss Jekyll and Mr. E. T. Cook, who will now edit the paper—I owe a deep debt of gratitude.

W. R.

December 29, 1899.

ORCHARD AND FRUIT GARDEN.

BUSH APPLE TREES.

I do not think any fruit trees grown in private gardens are more profitable than what are usually termed bush trees. These can be grown in many gardens where space could not be given standards. There are great advantages in growing bush trees, and with these one may include some kinds grown as pyramids if these are grown with a clear stem, as some kinds, notably some of the russets, have a decided tendency to this mode of growth. On the other hand there are some gross growers, and these, even with bush culture, need special culture. By this I mean occasional lifting to check gross growth. With bush trees this mode of culture will generally give good results, as it is an easy matter to check gross growth at this season, and by so doing ensure a full crop next year. Bush trees, even when grown in orchards, are very profitable, as the trees fruit more quickly than standards. I am aware some kinds are not so good grown thus. For instance, I do not advise the Blenheim Orange, which with me is too gross, and much better results are obtained from standards; at least, this is my opinion. There are a few others, such as Belle Dubois, Twenty Ounce, and Bramley's Seedling, which may be placed in the same category.

But so many succeed under bush culture that there is no difficulty whatever in having a splendid collection of trees, and, what is so important to the cultivator, grown thus the trees fruit so quickly and fail so rarely that there can be no doubt as to this being one of the most profitable modes of growing them. To get the best results the trees need feeding. In

many gardens I have noticed the soil is cropped quite close to the stem of the trees. This is not wise. Care is needed in pruning certain kinds, while others crop so freely that very little pruning is needed. Alfriston is one of the best grown as a standard, and we have few better varieties grown in bush form. Like most of the free-fruited kinds this bears a very heavy crop one season and a light one the next, but rarely fails altogether. This I attribute to its late blooming, as the flowers often escape where others are injured. On the other hand, Alfriston is not always reliable. When I lived in the north and had a much heavier soil to deal with, it was not nearly so reliable, and, though a strong grower, in badly drained soils I have seen it canker badly. This variety I grow in quantity, having a row of bush trees on the eastern side of the garden. These, planted from ten to fifteen years ago, give wonderful crops of fruit, and I note, like other strong-growing kinds, their free-cropping is their salvation, as it prevents severe pruning. Bismarck is equally free-bearing, and is not so strong a grower. This comparatively new Apple has now been sufficiently long in this country to test its merits, and it thrives grandly in our light soil. The fruit is handsome, solid, and large. I recently saw this in standard form doing well. It appears to thrive in most soils and situations. This variety was introduced into this country from New Zealand, and is certainly valuable, as my trees fruited freely when only two years old. I prefer it grown as a bush on account of the heavy fruit, which also colours more freely.

There is a great gain in growing some of the best dessert and cooking Apples in bush form, as should any variety fail, it is an easy matter to replace it with one more reliable. Some of our best Apples canker badly when they attain age, but grown in bush form on the Paradise there is less disease. Take Cox's Orange grown in bush form, what splendid quality fruits are secured from bush trees, this variety doing well under this mode of culture, as the fruits can be left on the trees later and a much longer season secured. I am aware it does well as a standard, but with bush trees much finer fruits are obtained and the trees rarely fail to crop. Much the same remarks apply to Ribston; indeed, there is more need to grow this in bush form as on the Paradise stock there is freedom from canker which is

so fatal to standard trees. Sturmer Pippin thrives as a bush, and if the fruits are not gathered too early it is the best late Apple we have, and its Ribston flavour makes it valuable. What a pretty bush Pine Golden Pippin makes and the same remarks apply to the newer St. Edmund, a delicious Apple that does grandly under bush culture. This last is well worth planting, as it is one of the best Russets we have. Such kinds as Rosemary Russet, the Egremont Russet and Claygate Pearmain are all at home grown thus, and the trees give a good return for space occupied.

Of new kinds, Jas. Grieve promises well and is a first-rate bearer in bush form and of good quality. Allington, also a new Apple, is excellent in bush form, and the flavour of well-finished fruits is little inferior to that of Cox's Orange, which it somewhat resembles. Though full early to write about Charles Ross, the new Apple of the year, the raiser informed me it would make a splendid bush. It is a great acquisition and very handsome, though I cannot say I like the way in which it is sent out, paying half this year for a tree to be sent twelve months hence. For orchards, trees on a short leg or stem are preferable, as the lower branches clear the soil. The fruits are readily gathered, and, what is so important, these kinds that are very free fruiters may be thinned and the trees given food, as if on grass it is well to feed, removing if necessary the turf for that purpose.

G. WYTHES.

Apple Margil.—"H." (p. 472) says that this Apple is liable to canker, but I never found it so, though it may, of course, have this characteristic in had or unprepared soils. I fancy the neighbourhood of Bury St. Edmunds suits it, for I always got excellent samples of it while at Livermere, and these were generally bigger than any others which used to be shown at the Crystal Palace shows; but, owing to the best tree being heavily shaded by and close to some large Oaks, I could never get the colour up sufficiently so early in the year, though it came up well later. As regards flavour it is equal to Cox's Orange, but not quite so juicy. Its season is later than that of either Ribston or Cox's Orange, being at its best during the first two or three months of the year, and a few trees of it ought certainly to be grown to form a succession to these more popular varieties.—J. C. TALLACK.

Trees purchased at markets.—In many towns it is getting more and more the custom to employ some third-rate auctioneer to sell off surplus rubbish from fruit nurseries. Varieties quite useless for the kind of tree, badly worked and worse trained, without a bit of packing of any kind round the roots, which are dried up and shrivelled, are purchased at prices very little below what good trees are offered at by nurserymen. Such a custom is bound sooner or later to die a natural death, as few people care to spend money time after time and be disappointed continuously. But love of a so-called bargain constantly tempts fresh customers, and I have sometimes seen gardeners, who of all men ought to know better, attending these sales. It is a great pity, for the trouble does not end with the bad trees. Wherever an Apple or a Pear has a local popularity anything is labelled to suit. Dr. Harvey is one of the most popular of Apples in Norfolk and Suffolk among cottagers and shopkeepers, and I have noticed how often this name turns up in these sales.—H. R.

Apple Cornish Gilliflower.—All who have ever eaten good fruit of this seldom-seen Apple will agree with the estimate of "A. W." as to its being the equal of Cox's Orange or Ribston Pippin in flavour; indeed, I look on it as being the best-flavoured Apple I ever tasted. Certainly it never becomes really mellow, as do these, with age, but it is not everyone who likes a soft Apple, a little resistance to the teeth being considered

an additional recommendation by some people, and these will certainly set a high value on the Gilliflower. I never expect to see it very popular away from the southern and other favoured counties, my experience being that to get it in perfection it, like Calville Blanc, requires a wall or some particularly favoured spot, and, as pointed out by "A. W.," it requires pruning with great care and leaving in a more rugged condition than most Apple trees in order to preserve the fruit-buds which form on the young wood. In a young state it is a very vigorous grower and not free-fruiting, but if allowed to grow and extend itself freely it becomes a fairly free cropper and one of the surest, as it very rarely misses. In Cornwall it used to be highly esteemed for the winter dessert, and kept in good condition well into the spring months. I see that a writer lately classed it among the "small and unattractive" varieties. Small it certainly is not when well grown, and though it is not to be compared with the showy varieties for external beauty, its unattractiveness is only skin deep and does not appeal to the consumer who knows what is before him.—J. C. T.

Stewing Pears.—The recent granting of awards of merit to two varieties of stewing Pears will probably cause some surprise, as no doubt many persons think that there were enough of these hard fruits in cultivation already. But whilst awards of merit may be taken as simply commendatory, and not in the same light as a first-class certificate, yet the two referred to, Notcutt's Winter Orange and the very little-known Double de Guerre, if such be its correct name, shown by Mr. Frank Lloyd, of Shirley, Croydon, in whose garden two trees of the variety fruit most abundantly, are both very free croppers, and if the fruits are not of the huge size seen in Catillac or Uvedale's St. Germain, yet they are large enough for all ordinary purposes, and being so freely produced are relatively more meritorious. The flesh of the latter variety when cut is certainly whiter, softer and less free from grit than is that of the other, but both are excellent additions to the list of stewing Pears. It is too commonly the case that whilst so many dessert Pears are grown in gardens, resulting where there are good crops in great waste, because so many decay before they can be used, relatively few stewing Pears are grown. Certainly it is not too much to expect that at least six of these varieties should be found in any garden, if not more, and that the fruits be held over till after November, in which month good dessert Pears are few, as when properly stewed these otherwise hard, flavourless fruits not only develop wonderful flavour, but are singularly pleasant and delicious. Up to a certain period hard green fruits of any fair-sized variety may be stewed, thus saving the real cooks until later in the winter. We ought to be able to purchase stewing Pears cheaply in the market all the winter. That is not so. The two varieties above-named should be very largely planted, and in time that winter scarcity may be overcome.—A. D.

Pearmain Apples.—I was greatly interested in the article on Pearmain Apples published last week, as it brought to notice some of that section which are valuable though not often seen. Take, for instance, Blue Pearmain. There can be no doubt that this is little known, though it deserves to be in every garden or orchard, and I would strongly recommend its culture. Then, again, Mabbot's Pearmain is not much grown, though it is a most lovely Apple and of good quality. This Apple has one peculiarity that upsets the generally-received idea as to colouring, i.e., that it develops its colour off as well as on the tree, and colours as well in the dark as in the light. For instance, the fruits of perhaps the loveliest dish of this ever exhibited, and which was shown at the Crystal Palace two years ago, were picked green and each fruit wrapped in paper until within a day or two of the show, when they were found to be of the loveliest colour imaginable. Lamb Abbey Pearmain I found to be quite the best dessert Apple for April and May, and I also

found it a first-rate cropper, though the fruits are rather on the small side, but worth all the attention they can get in the way of cool storage for late work. In the Veitch flavour competitions this was preferred to Sturmer Pippin, of which good dishes were exhibited against it. Crimson Queen "A. W." does not include in his list, but while at Livermere I found this one of the most reliable Apples I grew, always cropping heavily on trees of medium size and the fruit handsome, good alike for dessert or cooking, and lasting over quite a long season. I would include this without hesitation in a very exclusive list of valuable Apples to grow. Of Baxter's Pearmain I have not so good an opinion, and fancy it may well be allowed to die out. Hubbard's Pearmain, too, though a good Apple, did not pay for its room, the blossoms being, I fancy, rather tender. Anyhow, it never cropped freely, though mostly well set with buds, and the tree is liable to canker. Christmas Pearmain is a first-rate Apple, and "A. W." would do well to add it to those he already grows, as it is a certain cropper and makes a very good tree.—J. C. TALLACK.

STRAWBERRIES FOR EARLY FORCING.

In those gardens where the best of conveniences exist for fruit forcing, the earliest batch of Strawberries will have been got under cover some time, but in places where the earliest dishes are looked for from about the end of February to the middle of March, the present is a good time to commence. A well built brick pit in which a good lasting hotbed of leaves can be made up and with a single hot-water pipe round it is a very useful aid to Strawberry forcing. Supposing such an one to be at command, the leaves may be got in and firmly trodden a week previous to starting the Strawberries. For early work strong single crowned plants should be selected, and after cleaning the pots and removing any decayed or broken leaves, each plant should either be dipped in or syringed with some good insecticide. Many of the proprietary articles are excellent, and a good home-made one may be prepared by rubbing up a quarter of a pound each of soft soap and sulphur and adding about a quart of boiling water, agitating it violently and stirring in a wineglassful of paraffin; gradually add another gallon of boiling water and let the mixture settle down. If any oil rises to the surface, skim it off and add one gallon of water to a pint of the mixture for use. A stronger mixture may be used if the plants appear dirty, as it is less likely to do harm now than later.

Having all clean, the pots must be plunged up to the rims in the leaves, and if very cold weather ensues a little warmth may be turned on, sufficient to maintain a night temperature of 45° and a day temperature of 50° to 60°, according to the weather. A good supply of air must be left on night and day. Damp the leaves slightly when the weather is fine, and do not allow the soil in the pots to become dry, though at this early stage the roots will not require much moisture. It will be easily apparent when the latter have become really active; the young growing and feeding points will appear on the surface, and the plants will be found to require more water. Then feeding with liquid manure twice a week may be commenced, and a light top-dressing of soil with a little of a good chemical manure, such as superphosphate, mixed with it should be laid on and watered home. The crowns by now will be showing the divisions that eventually make the flower-buds, and when these can be distinctly seen the plants may go to the house in which they are to fruit; that is, unless there are separate compartments for fertilising and fruit ripening and for the periods of growth and

swelling. This is an excellent plan, and the trouble involved in shifting a lot of plants, though considerable, is in a manner repaid by the extra chance given of a look through them for insects, mildew, and other troubles.

It is quite possible by a little manipulation of the atmosphere to arrange for the plants to begin and finish in the one house. When a fair number are in flower the atmosphere should be kept buoyant and rather drier than usual by admitting more air and giving a little more fire-heat. When the fruits on the majority are swelling the conditions may be rather more exciting, while ripening fruit is always improved in colour and flavour by the admission of plenty of fresh air. From five to seven fruits are ample for each plant in these early batches to carry if they are to be the best of their kind. The feeding with liquid manure should cease directly the fruit begins to colour, and a few bits of forked sticks to raise the fruit from the rims of the pots are advisable.

For the early batches the useful old La Grosse Sucrée is still an excellent variety, Royal Sovereign and Sir Joseph Paxton making a trio hard to beat. The last may be strongly recommended where more tender varieties fail.

ASPECT FOR PEACHES.

WILL Peach trees do on an east or west wall, and which is the better?—C. F. F.

* * The question asked requires consideration as to locality. Soils also would cause trees to fail on one aspect which would do well on another. I would not advise east or west walls in the northern parts of the country, as the best results would be secured on a south wall. But there can be no doubt whatever that your trees would do best on a west wall, as on an east wall, owing to cold winds in the spring, Peach trees bluster badly. Only in very exceptional cases would I advise planting on an east wall, these being in the most favourable soils and localities. It may interest "C. F. F." to know that there are cases of successful Peach culture on north walls. The advantages of a north wall are that by planting second early kinds, such as Goshawk, Stirling Castle, Violette Hâtive, Grosse Mignonne, Crimson Galande and Dymond, the season is greatly extended, as the above varieties are mostly of superior quality to the very late kinds, such as Gladstone, Golden Eagle and others, and one gets equally late fruit as well as quality. The bloom is also retarded, and when others on more favourable aspects are destroyed, these escape. Last summer and the previous one were hot and dry in the south; indeed, so hot that Peach trees suffered on both south and west aspects. In such a season trees on an east or north wall would be at home. I prefer the north, as the hot sun so warmed the wall through from the south that the warmth on the north from this was retained, the trees thrived well when those on the south were roasted, as it were, and the afternoon sun on the south side was ample to mature the fruits. It is a question of soil and locality, and in some instances variety also, as it would not do to plant any kind on an east or north wall. What would be a success in the south and west of the country would probably be a failure in the north. I much prefer a west wall to an east, and, though I grow a goodly number of trees on the south, these are for the earliest supplies to follow the forced fruits. Such kinds as Waterloo, Early Alexander, Amsden June, and Hale's Early are often ready by the third week in July, but they lack the quality of the midseason kinds. You did not give any particulars as to varieties you wish for on a west wall. Any of those named above would not fail, and you may with advantage add to their number. Bellegarde is excellent, as also is Barriogton, whilst for later supplies on the same aspect

you would find the Nectarine Peach, Sea Eagle, and Princess of Wales the most reliable, especially the Nectarine Peach and Sea Eagle; indeed, after a trial of most kinds I do not know of better kinds than the last named. On such an aspect by growing the best varieties you may have fruit from the end of July to the end of September, and even later if desired.—W.

Pears keeping badly.—I quite agree with what "J. B. S." says (p. 471) as to Pears keeping badly, and I feel sure that it was the protracted drought that was the cause of it. Although my crop of Pears was fairly heavy, they were so much affected by prolonged heat and drought that they could neither attain their ordinary dimensions nor would they keep sound until the ordinary season of ripening. I find a dull, dripping season with an abundant rainfall necessary to swell off a good crop of Pears. This year no one could tell by a month when any variety would be fit for table. That hard stewing Pear Catillac is rotting as badly as any of the soft dessert kinds, and I can attribute it to nothing else but lack of moisture at the roots.—J. GROOM, Gosport.

Pear Glou Morceau.—This variety, like Chaumontel and many others, is greatly influenced by the way it is treated, and is good or bad according as the culture is suitable or the reverse. In the south and south eastern counties it is often grown as a bush, but in the north it requires the protection of a wall to bring out its good points. It is rather remarkable that in so many gardens in the south one may see early kinds, such as Williams' Bon Chrétien, Souvenir du Congrès, and even Jargonelle, freely planted against warm walls where the fruit and wood ripen really too quickly, and the former to be of good quality must be gathered and finished off in a cool fruit room. It would be far better to grow these on espaliers or even bushes, except say one tree for very early supplies, and to utilise the valuable wall space with those kinds that ripen later, and consequently need the September sun. Glou Morceau at its best is a very juicy and refreshing Pear of good flavour, but unless well ripened, it is not good enough for a first-class dessert. The habit of the tree when given this treatment is all that could be desired, vigorous, yet fruitful, and it should be included in all collections of choice winter Pears.

Grapes Gros Colman and Gros Maroc.—Several correspondents have been comparing these two varieties, but in spite of a certain outside resemblance they are so totally different, that no comparison can be really drawn between them. Your Elstree correspondent notes the fact that he saw the two growing side by side in the same house, and that Gros Maroc was superior. This is no argument against Gros Colman, as the two Grapes require different treatment. In the first place, Gros Maroc, started at the same time as and grown with Gros Colman, would be at its best considerably before it, while to say that the latter was poorer in colour simply shows that it had been improperly cultivated, over-cropped, or was not finished. Gros Maroc is, I will admit, a much easier Grape to grow than Gros Colman, but it is certainly not of better quality. The appearance of properly finished Gros Colman leaves nothing to be desired, and to many people the distinct flavour of this Grape is an advantage, only the fruit must be ripe. It needs a long season and good culture from first to last, while Gros Maroc with its great spreading growths and comparatively small bunches finishes easier and more quickly. Both are useful in their place, but they cannot be compared.—H. R.

Unnailing Peach trees.—The practice of unnailing Peach and Nectarine trees occupying walls, say, in December or January used perhaps to be practised more in bygone years than at present, and I think it has much to recommend it. Some years ago a good old Peach grower living in Suffolk used regularly to practise it with a view to retarding the buds, and so deferring pruning till as late in spring as possible. Cer-

tainly the regular crops of fine Peaches he grew warranted the practice. All gardeners know, or at least those who have had experience with Peaches on open walls, what excitable subjects the trees are, and, strange though it might appear, the more immature the wood is the sooner the trees start in mild, genial springs. Probably this is partly accounted for by the fact that most Peach trees are worked on Plum stocks of some sort, and these are never quite dormant even in midwinter, young quill-like roots being often discovered when trees are lifted for replanting under glass at that date. Of course, the principal object in unnailing the trees is to bring all the shoots away from the bricks, which sometimes become quite warm from the sun's rays even in January and cause the buds to expand. With old trees it is not a very easy task, but it can generally be accomplished by driving a sufficient number of tall, very stout stakes into the alley or pathway facing the trees, and afterwards bunching the branches carefully and fastening them with tar twine, using bandages where there is any fear of undue pressure on the bark.—GROWER.

PEARS RIPENING PREMATURELY.

I CAN sympathise with Mr. Prinsep (p. 461) in the loss he has sustained by such a wholesale premature ripening of his stock of even the latest varieties of Pears. A fortnight or even three weeks is not so much to be wondered at, but for such good keeping sorts as Beurré Diel and Passe Colmar to be ready for use in October is most unusual. Still, in Mr. Prinsep's case the fruit seems to have ripened, whereas in the case of a lot of Beurré Diel owned by a friend of mine the fruit did not mature, but actually decayed in October, and the trees from which they were gathered are always well attended to as regards mulching and watering, so that lack of root moisture was not the cause. I have come to the conclusion that a hot, dry summer is not, as some suppose, the best for finishing off Pears and Apples to perfection. There must be a certain amount of natural atmospheric moisture to develop the juice as well as to impart the finest colour. This is proved by fruit from wall trees well soaked with liquid manure over copious mulchings and liberally hosed as well lacking both these qualities. The variety Jean de Witte, mentioned by Mr. Prinsep, I have never grown, and very seldom do we see it mentioned. Ne Plus Meuris is mentioned, and the superiority of climate is, I think, at once proved by this anything but generally satisfactory variety ripening well at Buxted. I could never induce this Pear to ripen fit for dessert in the midlands, even in the sunniest summers. The tree, a horizontal one, occupying a west wall, bore almost annually extra fine crops of normal sized fruit, but although I always allowed them to remain on the tree as late as possible, they never softened or developed juice. I was advised to put some fruit into a close box and place in a warm Mushroom house, a process which really does assist some varieties to finish, but it made no impression on Ne Plus Meuris, and in the end the tree was grafted with another sort. I imagine it is generally capricious, being so very seldom mentioned either in fruit crop reports or ordinary notes. It may be said that such may be put to a good use for stewing and the tree be made to pay. That may be, but my experience is that as a rule they are not to be compared with the true stewing varieties. I am glad to see Beurré d'Arenberg named in the list. This Pear has been much more frequently spoken of the last two or three years. I consider it ought to be included in all collections, however limited, as although perhaps not quite so rich as Winter Nelis, it is an excellent

substitute where the latter does not succeed and possesses a grand constitution. It succeeds equally as well as an espalier as a wall tree. As a pyramid I have never tried it. Frequently the tree crops so heavily that if thinning is not practised early and liberally, growth suffers in consequence. No amateur's garden should be without at least one tree of *Beurré d'Arenberg*.

J. CRAWFORD.

Apple Gascoigne's Scarlet.—At p. 462 "H." has a short note on the above Apple. There can, I think, be no doubt as to its shyness in cropping, at any rate in a young state, or we should more frequently hear of it. It is some years since it was sent out, and yet how very seldom one meets with it even at large shows. I have heard that it is grown for market in some parts of Kent, where no doubt the soil and climate suit it. "H." rightly remarks, Gascoigne's is not suitable for restricted growth. This I have myself proved, having some ten years ago planted it as an espalier and never had a single fruit on the tree, which was healthy and not even rank in growth, as I attended to root-pruning and other cultural details generally considered necessary in order to induce shy sorts to fruit.—B. S. N.

Pear Beurre Bosc.—I was pleased to see this Pear favourably noticed by "East Anglian" (p. 462). Growing on a south aspect, two young trees here produce regular crops, and though the quality may not equal that of Winter Nelis or Doyenné du Comice, its handsome russety skin, distinct shape and large size make up for any deficiency. It is an October and November Pear, keeps fairly well after it is ripe, and though its season clashes with that of others, it deserves a place in the most select collection. In quality it is much superior to Durondeau, at least it is so in these gardens, and though similar in its shape and colour, the latter is not deserving of the same attention. No doubt the largest fruits come from trees on walls, and possibly of higher quality, too; still, *Beurre Bosc* deserves the attention of those who may not have grown it. It is good for exhibition, and, as "East Anglian" says, it should be a good kind for the market. In the west of England it is not, so far as I have seen, much grown for market.—W. S., *Road Ashton*.

Grape White Tokay.—I have often heard this Grape described as a coarse one, but I think this condition generally arises from the Vine being grown in too little heat. If grown in an ordinary cool vinery and started late in the season the berries never assume anything but a greenish white tint, and the flesh is decidedly coarse. When favoured with a Muscat house temperature and ripened by the first week in September, White Tokay is a Grape of no mean order. It will hang in a plump condition long after the Muscats in the majority of gardens have shrivelled. The Vine has a very vigorous constitution, and crops best when growing in a poor compost the reverse of rich. A shallow border composed of medium loam, with a large percentage of mortar rubble and charred wood, produces a hard lateral growth, which matures early and thoroughly, and is the only remedy against barren laterals, so common in the above-named varieties when grown in deep, rich borders and too liberally fed with manure water. Some time ago I saw some very nice bunches hanging on Vines in a garden in the eastern counties. Speaking of late white Grapes, how often is that, to my mind, most useful one, *Trebbiano*, seen in a semi-green state in autumn? whereas when given the warmth and light it needs it takes on a handsome deep amber shade and is very refreshing in February and March.—J. C.

Apple Cox's Orange.—I saw last September the tree of this beautiful Apple from which the branch was cut, the illustration of which was so admirably presented at p. 462. The entire tree, a fine round-headed standard, was fruited all over just as is seen on the branch, and pre-

sented, apart from the great usefulness of the crop, quite a pleasing picture. I fear we too little regard Apple trees from this point of view. Certainly Cox's Orange Pippin is not one of the richest coloured of varieties, but when the fruits are for the variety fairly well coloured they are very pleasing. I have seen on bush trees in gardens fruits both larger and more fully coloured than were Mr. Crook's, but none that I have tasted had better flavour. I usually find with this good dessert Apple that great size and high colour seem to have been gained somewhat at the expense of flavour. It has been essentially a Cox's Orange Pippin year, and the result of such splendid crops as I saw literally everywhere should be to boom the variety in a remarkable degree. Certainly we have no other Apple in commerce that is at all equal to it for table excellence, and the high flavour which so much characterises it is largely due to its yellowish flesh. But having it, what wonder if after the past season's experience everyone fond of Apples should prefer to plant Cox's largely. It seems to have thriven equally well in very diverse soils and conditions. At Forde Abbey on a fairly stiff loam, at Chilworth Manor, Romsey, on stone-brash, at Dropmore on a deep and fairly retentive soil, at Chiswick on the porous gravel of Middlesex, and apparently everywhere the trees have done well, suffered very little from disease or insects, and fruited alike abundantly. If fewer of the inferior dessert varieties that are so much pushed and far more of Cox's were planted, our fruit supply for table would be greatly improved.—A. D.

FIGS IN POTS.

THE finest collection of Figs grown in pots it has been my privilege to see is at the Royal Horticultural Society's Chiswick gardens, where presumably every sort worthy of cultivation is represented. I could not help being struck with the remarkable freedom with which the majority were fruiting in the summer, even in quite small pots, especially when it is remembered the length of time they have occupied them. Bone-meal is a great favourite as a fertiliser both for Figs and other fruits, Tomatoes and Grapes in particular, and the freedom with which the roots spread over the surface speaks volumes for it as a fruit tree manure. The collection is so extensive, that it would be utterly impossible to make mental notes of a tithe of them, and time at my disposal did not even permit me to get them otherwise. Their inspection would be an object-lesson to any fruit grower who is interested in Figs. The house seems excellently suited to Fig culture, being span-roofed, well ventilated, wide and lofty.

At Gunnersbury House, Mr. Hudson, too, grows a considerable number in pots, though, of course, in this case a smaller number of sorts suffices. It is Mr. Hudson's rule to produce only the earliest batches of ripe fruit and others for late autumn and early winter, midseason supplies not being required. My visit being an autumn one, I found that *Negro Largo* was much in evidence, and in pots, mostly of small size, it fruited freely. Here, too, span-roofed houses, light in structure and well ventilated, were filled with Figs. For later and successional use *Nebian* seemed very free, and d'Agan promised to carry on a supply until late in the winter, its fruits being small and hard when *Negro Largo* was ripening freely. Restriction in soil space and high feeding with suitable fertilisers gave splendid results.

There is no doubt that from intelligent cultivation a much longer and regular season of fruiting can be obtained from trees in pots than from those planted out, and as a rule not more than one house is devoted to Figs, except in the largest gardens. Of course, such fine fruit cannot be expected as permanent trees give, but for purposes other than exhibition these smaller fruits are quite as good. There is, too, a greater control over the season when they may be obtainable either from retarding or forcing. It must not be denied that Figs need close and continuous

attention to watering, but if this is compared with the time expended on the suppression of leaf and lateral growth as well as at the root, a very good balance may be made in favour of pots. In too many cases one sees Figs relegated to the back wall of a Peach house, where they simply take their chance, and this feeling is often fostered when ripe fruit is only appreciated by one, or it may be two members of a family.

From pot trees it is easily possible to obtain two crops during the season. It would be scarcely fair to expect more, though it is possible with some sorts to do so, given the treatment necessary. Thus grown, the stopping and training are reduced to a minimum, and a greater certainty of good results follows the pinching of the current season's growth in the production of a secondary fruit crop. Some kinds are prone to cast their early formed fruits prematurely, but to the smaller grower this is not a serious matter, for there are reliable kinds to be obtained that are free from this failing. W. S.

Wills.

Grape Lady Hutt.—Unless of exceptional merit, new Grapes are slow in making headway in the smaller gardens. Where planting is being carried out in large vineries it is not difficult to introduce new kinds. There is no other means that will popularise Grapes so much as the show board. If a new sort possess a distinctness in combination with the other attributes of a good Grape and is brought to the front as a prize-winner, it soon finds its way into private and market gardens. Lady Hutt, generally speaking, has not yet supplanted Foster's Seedling and Buckland Sweetwater as a summer or autumn Grape, and its slowness to be put under trial will give these the monopoly for some time yet. It never will, of course, compete with the Muscat of Alexandria in popularity. Neither Mrs. Pearson nor Golden Queen have ever become what might be termed favourites. They do well in a few instances and fail in many, and it is just this that makes the progress of other new ones slow. At Gunnersbury in September I saw this Grape in bearing, and must say it was a different fruit from what I had expected. Mr. Hudson, however, speaks well of it both as to quality and keeping. It had been inarched on to a Muscat stock. As I had both planted and inarched young rods myself on to older ones, I was interested in Mr. Hudson's Vine and his opinion of it. In the shape of the berry, Lady Hutt resembles Buckland Sweetwater, but its skin is thicker; hence less transparent and better adapted for late autumn use. Its colour is pale as I saw it, but, as this is so much influenced by the soil, structure, and treatment given, it would be impossible for one to obtain its general character from one case alone. I was tempted into planting not from actual experience, but by advice from a very good gardener who had it established, and who described it as a decidedly useful Grape.—W. S.

NOTES AND QUESTIONS.—FRUIT.

Pear Zephirin Gregoire.—An excellent late Pear. Its season is during December and January. This variety will not succeed on the Quince, but on the Pear stock it grows well and makes a fine bush or pyramid and then bears abundantly. It is rather small and roundish in form, but its deficiency in size is made up in its delicious flavour. It has a greenish-yellow skin covered with russet dots and patches, and the flesh is yellow, buttery and very juicy.

Pear Bergamote d'Esperen.—A good and well-known late Pear of excellent flavour. The tree succeeds and bears well grown either as a bush or cordon on the Quince, the fruit from the latter invariably being the larger. The fruits should never be gathered till late, or they will shrivel. It is from medium to large in size, with a thick greenish-yellow skin, mottled with dark brown russet. The flesh is white, juicy, sweet and richly flavoured. Is in use from December to March according to the character of the season during growth.—A. W.

STOVE AND GREENHOUSE.

THE ORANGERY.

THERE is still many an old English pleasure ground graced by a good orangery, and where it happens to be well placed the effect is often good, though the use has to some extent passed. The spread of greenhouses and bedding-out led to the disuse of the orangery in our country, perhaps, more than in any other. In other European countries, however, it remains much longer in use, and the orangeries built many years ago near the great cities of Europe, such as Vienna, Berlin, and Paris, are still in use. One could hardly see a better instance of what is called a survival than at Sans Souci. The cost of the orangery there must have been immense, and still every year the poor, scarecrow trees are dragged out, black sticks with a few leaves on top of them, without the least trace of the form of the Orange tree as it grows in the south, now within a day or two's journey

EUCCHARIS AMAZONICA.

I CAN assure "H. R." that I carefully read THE GARDEN week by week; indeed, I have but very rarely missed it since the year 1872, and I was fully aware of his former note in the issue of September 30 on the above. It was not a question of market garden or private garden procedure at all, nor the way the so-called floral decorator uses the flowers of the Eucharis that I took exception to. It was the emphatic advice of "H. R." to so treat the Eucharis that it would only flower from July to September, the interval of all in the year when such things are of least value. Thus it was I suggested "H. R." had a special object in view, and therefore a special demand for the Eucharis at that time. I mentioned that market growers avoided if possible that same interval as a coincidence. At this very time there are hosts of beautiful flowers invaluable for cutting if need be. There is nothing new or remarkable in the Eucharis flowering from July to September; it is seen in market gardens every year, the plants blooming with the greatest freedom, and this in quite cold and freely ventilated houses. It is the ones that usually flower from January to March that do this. But when "H. R." refers to this late summer flowering as though all else was an imposition, he is not merely taking a derogatory

temperature of about 60° at night, and for some months this year had no fire-heat whatever. Indeed, the hundreds of spikes now appearing must have been formed in embryo under the very natural conditions of the past tropical summer. This I regard as a complete refutation of the notion that the more natural flowering is but once a year. The above have been thus grown and flowered twice at least each year during the last ten years, and instead of a weak, debilitated stock it is now more than fourfold the original, and may now be doubled if space permitted. Growing the Eucharis in the greenhouse may prove an interesting experiment, and I think the owners of private gardens require something more than leaves for at least nine months of the year. E. J.

Potting Lilies.—Fashions in plants and flowers change, but not always for the better. I remember thirty years ago what grand pots of *Lilium lancifolium rubrum* and *album* might be seen in private gardens, having been grown more especially for placing in front halls and windows of the mansion. Though various other subjects have come to the front since then, I know of nothing to equal the above for autumn use. These beautiful Lilies will not submit to rough-and-ready treatment when in pots. Good drainage, an open, rich compost consisting of fibrous loam three parts, peat one part, some leaf-mould and coarse sand or grit, will grow them well. Plenty of pot room and thorough drainage are also important. Wintering the bulbs safely is the great point. When left carelessly about in the open unplunged and uncovered, frost and wet are sure to work mischief. They should be repotted directly the stems die down, and not left till spring if possible. Potting completed, a frame, pit, or perfectly cool glass house, or even shed, will form suitable quarters for the winter. Plunge the pots in leaf-mould or ashes, and cover them with several inches of, if possible, the former, as it is light and not so apt to cripple the new growth in spring as ashes. In spring give frame protection. Given unremitting attention to watering with pure water at first, and later on weak farmyard liquid, any trouble taken will be amply rewarded.—F. S. W.

Euphorbia jacquiniæflora.—This plant well repays for careful attention, the long racemes of bright orange-scarlet being so distinct from anything else at the same period. When grown singly it rarely makes a well-furnished pot plant, but a few plants grouped together have a fine effect. With care the roots need not be disturbed, and so arranged they are useful for grouping with other plants. When grown for cutting, planting out may be recommended. Good drainage should be given and a rough, open compost used. I find they do best if planted in a bed where there is a little bottom-heat. An important point in connection with the culture is to take care of the stock plants. After they have done flowering, those required for cuttings should be kept in the stove, giving them a light position. When the bloom is cut about Christmas-time, they generally flower again from the first side shoots, and later on they start into new growth. The best cuttings are those taken when the new growths are about 3 inches long. These may be put in singly into small pots. They require watching, as damping is sometimes troublesome. They should be put into the warmest part of the propagating pit and kept quite close until they are rooted. After they have made a good start they may be stopped, but only the points should be taken off. If taken off too low they are liable to die off. A compost of equal parts of loam, leaf-mould, and peat, with sand added, may be used for potting. The roots are very tender, and great care should be taken not to break the balls. The roots are also liable to die off if watering is not regularly attended to; either extreme is equally damaging. I have seen it grown in a cool house during the summer or in a pit, but the best plants I have had have been grown entirely in the stove. Those grown under cool



The orangery at Holme Lacy. Engraved for THE GARDEN from a photograph by Miss Pilkington.

from most parts of Europe. We illustrate this week the orangeries at Kew and Holme Lacy, where there are some of the best forms of that structure, which is still useful in a large garden as the winter home of Myrtles, Verbenas, Oleanders, Pomegranates, large African Lilies, and many other plants. The more the beauty and fulness of our hardy plant flora are seen, the less need there will be for this structure, the more so as the natural plant has always a beauty of habit which we rarely find in anything grown in a tub. The true use of the tub is not to grow for us things we can grow in the open air, but rather plants too tender for our climate in winter, as, for example, the sweet Verbena in many districts and the Myrtle, also the African Lily, which survives in the south of England and Ireland, but is, however, soon stricken if we leave it out in the midlands, the northern parts of our country or in any district away from the sea.

view generally, but is minimising the value of one of the finest typical bulbous plants ever introduced to this country. It most certainly is a tropical plant, a term I employ in preference to the indefinite term stove plant. For a stove is what the gardener makes it, and it is here, too, that boundless bottom-heat to roast the roots on the one hand is often found, as also the excessive water supply that such heat renders necessary, that quickly leaves its mark behind. "H. R." is out of touch with the facts when he suggests that market growers "keep their plants over bottom-heat and drive them for all they are worth all the year round." Instead of bottom-heat the largest percentage is grown on open wooden stages, the pipes being a few inches from the ground floor.

Again, as showing what an erroneous view "H. R." has taken, I may say that, instead of weak and debilitated spikes, the spikes of fully grown bulbs will be nearly 2½ feet long, each the thickness of a man's index finger at its base, and carrying an average of six blooms per scape, that measure 4 inches across and often considerably more. Within a stone's throw some hundreds of bulbs are throwing up from a batch that flowered in July last. These are in the comfortable

treatment generally lose their foliage when removed to a higher temperature, which is necessary to open the bloom.—H.

WATERING POT PLANTS.

To keep plants in a healthy condition watering must be carefully attended to at all seasons of the year, and during the winter, when it is necessary to give artificial heat, it requires additional care. Many plants will take even more water than during the summer. This, of course, applies to those grown indoors where shading is used in summer and little or no fire-heat given. I find at this season of the year many subjects are liable to get dry beneath while the surface may appear moist, particularly where plants stand on stages where the heat is beneath, and when once they get very dry at the bottom the best way is to dip the pots, so that the soil may be thoroughly moistened through. With some soils it seems almost impossible to get the water to pass through from the surface when once it gets very dry. Plants such as Heaths, Azaleas, &c., that are potted firmly in peat are difficult to wet through, except by dipping, if they once get very dry. Of course, they ought not to be allowed to get so dry, but it will sometimes happen.

Many Ferns are very deceiving with regard to taking up water. A. Farleyense, if in a healthy condition, will take up a quantity of water, and if not carefully looked after it will suffer before it is noticed, for it is the under fronds which go first. I have previously referred to the necessity of giving careful attention to this Fern, and it cannot be too often repeated, for I believe inattention to watering is the chief cause of failure. Excess of moisture is equally damaging, and with plants that are in an unhealthy state it is better to keep them a little on the dry side than otherwise, but with vigorous, healthy plants there will be little fear of over-watering under ordinary treatment.

Palms and other subjects where the syringe is used freely will not be so liable to get too dry, but even these plants may be found quite dry beneath when the surface is moist, and those standing nearest the pipes sometimes do not get so much water from the syringing as those where they do not dry so quickly. Palms, like Ferns, often get over-watered, especially when standing on a moist bottom, but in the winter where much heat is given they may require more water than during the summer.

During the winter months it is one of the most important points in plant culture to keep the roots in a healthy condition, and this can only be done by careful attention to watering. Over-watering will sour the soil, while the other extreme will cripple the roots. It is therefore necessary to give careful attention to watering, and this will ensure the plants being in a condition which will cause vigorous and healthy growth when the season comes round for making a start. Much time is often lost in the spring through plants having been neglected during the winter.—A. HEMSLEY.

—There is, I think, nothing so trying to anyone in charge of a garden as the teaching of young men and boys how to water plants in pots. There is always the idea that so much watering has to be done every day, and this in winter, especially when the weather is dull or wet, is the forerunner of mischief. Time after time when dealing with young beginners I have made them leave the plants entirely alone for several days and then shown them the result, but in most cases the lesson is soon forgotten, and one may

see them giving a plant a spoonful or two of water when it was already far too wet. There are exceptions, of course, but by a great deal the majority of pot plants in winter is over-watered. Some there are that it seems almost impossible to harm in this respect, but with such plants as the various kinds of Pelargoniums the tale is only too plainly told in the yellow-looking points and leaves, and a general indisposition to grow or flower satisfactorily as the case may be. Carnations, again, have been killed in thousands by over-watering during November and the three following months. It would be far better in many cases with the latter plants to give orders that they are not to be watered at all during this period, and I am sure they would come through the ordeal far better than when given over to the tender mercies of the average garden assistant.

Specific directions as to watering that will suit every case cannot, of course, be given. To say nothing of the likes or dislikes of various plants and different methods of potting, there are always the texture and class of soil to be considered. A man who is used to his soil and knows well the plant he is growing can look through the ball, so to speak, and by a quick method of observation and rapid judgment forms his idea as to whether the plant needs water then and there or will wait another day. Several things influence his decision—the length of time the plant has been potted; whether the pot is full of roots or

oes through with a rush to the floor, but it percolates steadily and surely through every inch of the compost, and when the operator sees it trickling out of the holes at the sides and bottom he may take it that that plant has had sufficient to go on with for a time. A good test is the time-honoured one of tapping with the knuckles and noting the sound before watering, and should a doubt then exist, the weight of the pot is the safest test.—H. R.

GARDEN FLORA.

PLATE 1255.

DOUBLE-FLOWERED PEACHES.

(WITH A COLOURED PLATE OF PRUNUS PERSICA MAGNIFICA.*)

THE double-flowered Peaches are very old inhabitants of our gardens, having been noticed by Guy de la Brosse in 1636. There are numerous varieties—white, rose, red and deep red—but confusion exists as to their origin, synonyms, and date of introduction. However, they were hardly known until a double rose-coloured variety was figured in the "Flore des Serres" under the name of Pecher d'Ispahan, in 1831, vol. x., t. 1. Paxton, in his



An old orangery in Kew Gardens. From a photograph by Geo. Champion.

not; the plant itself; is it a thirsty subject or the reverse? The man who is to do his work expeditiously and correctly has to quickly consider these and other points as he pauses between each plant. All growers of plants know my meaning who have had years of experience in this branch of gardening. Eye and hand have to be trained to work together, and the mind must be quickly made up. A single mistake is not fatal by any means, and to water a plant a day too soon or leave it a day too long is not going to do it any serious injury. It is when these mistakes are being constantly made; when the plant is being watered in dribbles day after day until its roots are sickened and die that trouble ensues. If a plant is dry enough to need water at all it needs a thorough soaking that will last a day, a week, or a month, according to the state of the weather, the temperature, and the condition of the plant itself as to growth or rest.

Supplying water to large specimen plants in pots and tubs requires a deal of care. Here, again, the silly plan of dribbles daily is often practised, and a worse does not exist. Plants properly potted of such kinds as Azaleas, Camellias, and various hard-wooded stove and greenhouse species will not pass the water so freely that it

"Flower Garden," mentions *Amygdalus flore semi-pleno*, also Lemaire, in the "Jardin Fleuriste," t. 238, with a plate. In the Journal of the Royal Horticultural Society, 1848, vol. iii., part iv., pp. 246 and 313, it is stated that the *Amygdalus persica sanguinea flore-pleno* (double crimson) was introduced from China by Fortune. Jacques, in the Journal de la Société d'Horticulture de Paris, April 5, 1849, says that the trees come true from seed—a fact which can be ascertained by leading nurserymen. A strange fact is that these double or semi-double flowered plants produce fruits which, if they have not the fine quality of our cultivated Peaches, are not at all unpleasant to eat. The annexed plate was drawn from a fine tree now growing in the Jardin des Plantes, Paris, under the name of *Pecher de chine à fleurs double rouge vif* (double bright red-flowered Chinese Peach tree), but no record whatever can be found of its origin or introduction in the annals of this establishment.

* Drawn for THE GARDEN in the Jardin des Plantes, Paris, by Mme. Lejeune. Lithographed and printed by J. L. Goffart.



PRUNUS PERSICA MAGNIFICA

The tree is a standard twenty to thirty years old or more, 10 feet to 12 feet high, and thickly covered every spring in March with a profusion of its deep red splendid flowers, producing a beautiful effect. Such a beautiful tree ought to be not only more widely grown, but found in every garden, being perfectly hardy and growing in almost any soil and situation. This original tree was imported from China with numerous other double-flowered Peach trees, amongst them being one producing constantly every year double pure white and double pink flowers on almost every branch.

Referring to nurserymen's catalogues, we find *Amygdalus persica alba plena* (double white), *A. p. flore roseo plena* (double rose), *A. p. magnifica* (semi-double bright red), but none of the above varieties can approach or be compared with the splendid variety represented in the annexed plate as regards the profusion and bright colouring of the flowers. The plate represents exactly the colouring, shape, size, and disposition of the flowers on the tree.—D. GUIHENEUF, 20, Rue Albouy, Paris.

—Among the trees that flower before the middle of April, the Almond and the Peach, with their varieties, are some of the most notable. They possess all the tender beauty which is so characteristic of the great *Prunus* section of the Rose family. The Peach as a flowering tree is essentially one for the southern and milder parts of Britain. It is not so hardy or so vigorous as the Almond, neither is it so long-lived as a rule. Flowering in early April and whilst the branches are still devoid of foliage, it requires both shelter and a back-ground to bring out its full beauty. The best effect I have seen produced by the Peach is where a group of a dozen or so trees has been planted on the south-west side of a mass of Hollies. As is the case with several other trees that have been cultivated from time immemorial, the origin of the Peach is doubtful. We associate it most with the East, especially with Persia, whence, indeed, the old generic name of *persica* was derived. But it is now believed to have originally come from China, and some authorities point to *Prunus Davidiana* as the most probable type. If it be so, the Peach must have been greatly modified in other respects besides leaf and flower, for it blossoms at a considerably later date than Abbé David's Peach. In this country it has been cultivated for at least 300 years.

There are several varieties of the Peach in cultivation, of which the best known are the double white and double red. There is also one (*foliis rubris*) with reddish purple leaves and fruits. But, so far as I have seen, the variety which forms the subject of the accompanying plate is the finest. It was, I believe, first put into commerce by Messrs. Veitch. That firm has at any rate shown it at the spring meetings of the Royal Horticultural Society for five or six years past. A first-class certificate was awarded it on February 13, 1894. Of its beauty, the plate will give a better idea than any words can. A variety called Clara Meyer has also been highly spoken of.

The name given here is in accordance with Bentham and Hooker's "*Genera Plantarum*," but the Peach was called *Amygdalus persica* by Linnæus and *Persica vulgaris* by Philip Miller, both of which are still applied to it.—W. J. B.

Leaves as protection.—In the more distant part of the garden where there are beds of such things as Tree Peonies, Tea Roses, Hydrangeas, and any kind of shrub usually considered hardy, but still the better of a little protection in very hard weather, leaves form a handy and good pro-

TECTIVE material that may, I think, be used more often. Especially is this the case when there are semi-hardy bulbous or herbaceous plants associated with the shrubs, though in this case the leaves cannot be quite so thickly placed. In very exposed positions their use is hardly to be advised, as they are apt to blow about and make a litter. But if a little wire netting is not objected to, this may be placed around the beds and will keep all tidy. By their decay the leaves form a useful plant food, especially suitable to Azaleas, Rhododendrons, Kalmias and other peat-loving subjects when planted on soil not exactly to their liking. Much of the raking and cleaning that goes on in shrubberies is labour in vain, and might be done without to the benefit of the plants. If the leaves and rubbish were collected and mixed with any odds and ends of soil or manure, and again applied as a top-dressing to the shrubs, then for the sake of tidiness the cleaning up may go on, but to be constantly taking away their natural protection and food without replacing it is wrong.

THE WEEK'S WORK.

FRUITS OUTDOOR.

SINCE my last notes there has been a great change in the weather; frost has been severe, and this, combined with a heavy fall of snow, has practically put an end for the time to work among outdoor fruits, i.e., as regards anything directly connected with root or branch. Such weather gives an excellent opportunity for wheeling out all kinds of mulching material ready for distribution round the roots when a break in the weather comes, or, if there is no snow, spreading may take place simultaneously with wheeling out. I attach very great importance to the supply of good mulching material to almost all trees, especially to those in grass orchards where the roots have to contend for their supply of sustenance with those of the grass and other herbage. Under systematic mulching and careful attention to thinning the branches, the very finest, and certainly the best keeping, fruits may be got from orchard trees, and it is only neglect of these items that brings orchard fruit into disrepute. Perhaps for general purposes the best kind of top-dressing is that obtained from the remains of a fire in which have been consumed prunings and all other waste from the garden. To obtain the maximum quantity and the best quality of ashes or residue, the combustion should be slow, and there is certainly some art in making up the right sort of fire for the purpose. The proper course is to put a good dry faggot upright in the centre of the heap, and then to build up round this all the biggest pieces of wood set on end; then round this again should come the driest of the waste material, leaving the wettest for the outside of the heap, on which may again be packed any spare soil that may be at hand, such as the top soil removed from inside Vine and Peach borders, as any insects contained in this will be destroyed in the course of charring. A hole should be left at the top of the heap, through which a shovelful of live coals may be thrown on to the kindling material in the centre, and when the heap has got well alight, the only attention required will be to pack on a few shovelfuls of soil or wet rubbish from the outside wherever and as often as the fire burns through the casing. A heap of rubbish dealt with in this way will leave a large proportion of charred, but unconsumed ashes, while the same material thrown together loosely in the ordinary way and set alight will leave practically nothing. Of course, these ashes are far too valuable for a great variety of purposes in the garden to be all used as top-dressing to the fruit trees, but as much as possible should be spared for the purpose and scattered over the surface prior to spreading the mulching material proper, which should consist of the best farmyard manure obtainable at the time, and this should be spread

well over the area containing the feeding roots of each individual tree, not packed close up to and for a few feet round the hole, most of the feeding roots being found some distance away from the bole. A good guide for the application of mulching material is to let it occupy all the surface covered by the branches, then all roots will feel its influence alike. Whether the mulching should be put on thickly or thinly depends to a very great extent on the nature of the soil. Heavy soils in low ground will only require sufficient for feeding, and would be best described as a top-dressing rather than mulching, but with a lighter staple on shallow or raised ground the added material may well be put on to a depth of 3 inches or 4 inches if it can be spared, and will then act as a conservator of moisture in addition to its value as a manure.

STRAWBERRIES.—Strawberry culture has improved of late years in that plants of the current year are planted out in August and gathered from the next year instead of putting out ground layers in April and not fruiting them the same year. There is something to be said for each system, and where labour is scarce and ground plentiful, probably the old system of spring planting is still satisfactory, as it does not entail the amount of care in the preparation of runners that is imperative in the other case if we expect a good crop of fruit the first year, and this expectation is really the only excuse for August planting. To do the plants well the ground should be prepared many months beforehand, so that it may have time to settle, but in the meanwhile it need not lie idle, as an early crop of Potatoes or some other thing may be taken off before planting the Strawberries, and will leave the ground in better condition for the cropping. If the ground for next year's plants has not yet been prepared, the first opportunity of doing so should be taken, provided the soil is in good condition for working. The best means of preparing the soil in the majority of gardens is to double-dig or bastard-trench it, as in this way it is stirred to a good depth and room is found for two good layers of manure that, with the aid of surface dressings, will keep the plants in good condition for the three years during which they may be expected to carry good crops. The great value of bastard trenching is that while stirring and manuring the soil to a good depth the crude subsoil is not brought to the surface. Of course the methods of digging may be modified to suit the nature of the soil being dealt with, as in some old gardens it is possible to bring up the second and even the third spit to the surface without doing the slightest harm, while in others not so long under cultivation, or with a bad subsoil, to do so would be doing great harm.

FRUIT ROOM.—In the fruit room, space will, unfortunately, be getting almost too plentiful, but advantage should be taken of this fact to bring the remaining fruit into the best positions for keeping it from frost without using fire-heat. I always make a point of emptying the upper shelves first and of allowing a clear space between the walls and the fruit. Heaps of Apples and all that have been stored in barrels and boxes to economise room should be looked over for decaying fruits and spread out on the shelves if possible. My own experience is that the best Apple store is the one which can be kept fairly dry without much ventilation, and with a temperature not much above freezing point in cold weather. Fixed fireplaces or hot-water pipes for heating the fruit room are an abomination, and should be abolished everywhere, for no amount of care will prevent a fluctuating temperature and an atmosphere that is too dry in places so fitted up. The best means I have found of keeping things right when there is fear of frost getting inside is to light one or two small petroleum lamps in the room, as these can be regulated to a nicety. I recommend ordinary lamps with glass chimneys, as used for lighting in dwelling-houses, rather than anything in the way of oil stoves, as the latter give off bad fumes when turned low and too much heat when turned high. Pears when

wanted for dessert should be put into a warm room for a few hours before being eaten. This improves them greatly. CORNUBIAN.

KITCHEN GARDEN.

EARLY CUCUMBERS.—By the time these notes appear it will be time for those who wish for Cucumbers at the end of March and in April to sow the seed. More than ordinary care is needed at this early date in order to secure good all-round results. Those whose houses are under-heated or at all draughty had better wait another three weeks, as, failing ample top and bottom-heat, the tender leaves soon turn yellow and the shoots become hard and stunted. Presuming that a top-heat of from 65° to 70° and a bottom one of 80° can be maintained, no fear need be entertained of a speedy and perfect germination and unchecked growth afterwards. A great point is not to stand either the seed-pots or the young plants too near the roof-glass for some time to come, as if the outside temperature is low and frosty nights prevail, the plants are sure to receive a check, and so long as the glass is kept free from soot and dirt, 18 inches or 2 feet from the glass will not be too far. A handlight should be previously cleaned to place over the seed-pots when plunged in the bottom-heat bed. Sow the seed in small pots in a mixture of light loam, leaf-mould, and a sprinkling of sand, leaving half an inch margin for earthing-up when the plants are a few inches high, as Cucumbers, unlike Melons, always emit a number of roots from the base of the stem. Use the soil in a semi-moist condition, then water will not be needed till the young plants appear. Woodlice and cockroaches must be assiduously watched for, or they will soon destroy the lot almost before they are through the soil. Avoid the too common practice of wetting the foliage daily whatever the weather be; in fact, all moisture for the first three weeks after the young plants appear had better be supplied by vapour alone. Where roof blinds exist it will be well to lower them at eventide during inclement weather, as it is surprising how snug and warm these keep the house and economise fire-heat. Be sure to lay in some nice friable loam to dry in readiness for potting on the young plants in due course, nothing being more detrimental to success than potting Cucumbers in wet or sticky soil. At the first shift some worm-free manure may be incorporated, but the use of stimulants must be modified so early in the season.

SEAKALE IN BEDS.—There is no crisper or better Seakale than that produced by established crowns in the open, covered with pots and leaves. It is best when the individual beds consist of two rows of plants, with a 3-feet alley between. This allows of easy examination when cutting time arrives. The pots being placed, cover with leaves, allowing these to overtop the pots by about 18 inches, making them firm by treading. In exposed positions it is well to lay on the surface a slight covering of straw litter as a protection against rough winds. Thrust a stout testing stick into the beds, as should very severe weather ensue, an additional covering may be necessary. It is a good plan to cover successional beds with a few leaves—sufficient, in fact, to prevent the surface freezing or from becoming saturated with snow.

VEGETABLES AND FROST.—No risks should be run after this date in regard to laying in a good stock of such indispensable vegetables as Celery, Horse Radish, Jerusalem Artichokes and Turnips, as their quality does not materially deteriorate for several weeks when lifted, provided due care in laying them in is exercised. A cool, airy place and moist soil, where the produce can conveniently be covered with Bracken or litter, are necessary. Laying things in in dry soil or sand is ruinous. They quickly become leathery and lose all quality. See that plenty of crowns of Seakale for forcing indoors is lifted and laid under cover, also plenty of protecting material ready at hand for covering Celery ridges, and Parsnips laid in in sheltered nooks in case of frost or snow.

In case of frost, Savoys, Coleworts and other greens may be effectually thawed by placing them in a comfortable greenhouse a day or two before being wanted. In inclement weather examine closely all roots under cover, such as Carrots, the most susceptible of any root to decay, Salsafy and Scorzonera. The Onion store must also be inspected, any decayed ones removed, and those growing out at the neck laid aside for present use. C.

FLOWER GARDEN.

THLADIANTHA DUBIA.

THE fruiting of *Thladiantha* has been a feature at Cambridge for several years past, and as the

exclusively either male or female, and the stock extant has mostly been grown from tubers usually, I believe, of the male plant. I took the trouble, therefore, a few years ago to get both sexes, and now by artificially pollinating the female flowers I get any amount of fruit, the number being limited only by the amount of time available for the work of pollinating. The leaves of this plant are very ornamental, and on this account alone the plant is well worth growing. They die off about the time the fruit ripens, and it may be imagined that the show of fruit is then exceedingly attractive. Some years ago I made an observation on this plant (*Bulletin du Congrès International de Botanique et d'Horticulture à St. Petersburg, 1884*) which makes it absolutely unique among all flowering plants so far as I have yet been able to discover. It dies down naturally each year, not to a piece of stem, but always to a tuberous root, and never in the course of its life-history does it ever grow up from a stem portion of the plant. It is as if a Dahlia died down every year to a tuberous root without a bud, forming a bud as from a root-cutting fresh in the spring.

The first tuber formed by a Potato seedling is true stem, and the tubers afterwards are true stems, but in this case the only tuber produced by the seedling is a root tuber, and the tubers always afterwards are root tubers. The plant is a native of North China. It is perfectly hardy, and, so far as I have information, will grow in any kind of soil. The specimen illustrated is growing on an east wall.

R. IRWIN LYNCH.

Botanic Gardens, Cambridge.



Thladiantha dubia in the Cambridge Botanic Gardens. From a photograph sent by Mr. R. Irwin Lynch.

fruit is practically unknown, even to those who are well acquainted with the plant, the accompanying illustration may be of some interest. The fruits are scarlet or crimson, each about 2½ inches long by 1¼ inches in diameter, and about 120 hang in the space here photographed—6 feet by 3 feet 6 inches; some rather outside the area had to be drawn in somewhat in order that the full crop of the one specimen might be shown. Why the fruit is rarely seen can easily be explained. The plants are always

The double Rockets.—Writing of Mr. Harpur-Crewe's Wallflower and the need of its propagation by cuttings recalls to mind the old double Rockets, which were such favourites with the older florists, but are now so little grown. One is not surprised to see these plants so seldom now, pretty though they are. We are no longer dependent upon a comparatively small number of plants, but can make our gardens attractive with an ever-increasing variety of flowers. It is not, therefore, wonderful to find that such plants as the double Rockets are less grown now than of yore. Gardeners, besides, have so many requirements to provide that they are unwilling to take up the Rockets, unless, it may be, that

they seek to make a speciality of them. There are few professional gardeners who can spare the time, and it is the amateur to whom we must look if the old Rockets are not to become things of the past. Even now the gardens where they are seen are few and between, although some hardy plant nurseries keep up a small stock to meet any inquiries for them. The large white variety, known as the French double white, seems the most plentiful of the lot, but the Scotch double white Rocket is growing scarcer year by year. One sees a solitary plant, or perhaps two or three,

occasionally in gardens that one passes through. Rarely, however, do we find the long lines which were at one time far from uncommon. A gardener of my acquaintance still speaks with enthusiasm of the lines of some thousand plants he grew at one time in a former situation. I question much if it will be found in greater plenty anywhere than in Ayrshire and in the district around Glasgow, although even there it is rapidly losing ground. I well recollect the pleasure felt by two friends and myself on coming across a stock of some nice young plants in the garden of a clergyman at Kilbarchan. I do not know whether there are any there now or not. Still scarcer is the old double scarlet or crimson Rocket. I know of people who have tried to get hold of this in vain. It still exists, but is, one fears, almost doomed. At times the common double purple Rocket has been grown for it. My own taste does not lie much in the direction of flowers of this kind, but I must confess that I view with regret the possibility of their loss. They were admired by many true lovers of flowers in the olden days. They have their uses still. It will be unfortunate if we have ever to number them among the old plants which were favourites in their day, but have been lost.—S. ARNOTT.

NOTES FROM CARTON, IRELAND, IN NOVEMBER.

THIS is not by any means the best season for a first visit to any garden, but there was more than ample to occupy attention in these charming gardens. The Water Lilies, for which these gardens are noted far and wide, were resting; therefore there was not anything there to feast the eye. One could only imagine how lovely the Marliac and other varieties must look upon the picturesque water with such appropriate surroundings. Mr. Black has advanced further than most of us in his experiments with these Lilies. He finds the strong-growing kinds thrive well in deep water, i.e., up to 6 feet or so in depth. *Nymphaea stellata* during the past season was a decided success in the open water. The common white Arum Lily (*Calla æthiopica*) thrives upon the same water in a marvellous manner, strong growths being above the surface at the time of my visit. The water culture appears to change the season of flowering to the summer months. Near to these Lilies a long pergola has been erected recently, but sufficiently long to have become well clothed with climbers. Another season this will be a delightful promenade in the heat of the day.

No tender bedding plants find favour at Carton, and this fact afforded the greatest pleasure. Instead of such, alpine and bulbs in a wide range of variety receive every encouragement; so also do all kinds of hardy herbaceous plants, both early and late. These latter are massed largely in colours in the kitchen garden. Of conifers, note was taken of several fine Cedars, which, combined with the pergola and the water, were most attractive. These Cedars have still the best years of their existence before them. Forest trees merge into the pleasure grounds in a natural manner, constituting in places the most charming wild gardens possible. A bog garden, which has been a great success, is situated at some distance; hence, as time was all-important, a visit was deferred until a future occasion. There is a large expanse of water upon a considerably lower level, the upper end of which is crossed by the carriage road. Most effective planting has here been carried out down to the water's edge and also upon the islands. Here, again, the natural beauty of the surroundings has not been allowed to suffer in the slightest degree.

Under glass there was a splendid display of *Chrysanthemums* just in season, quantity not being sacrificed for mere size of blooms. The *Malmaison* Carnation is well grown at Carton, sturdy young plants promising a good return. Climbers evidently find favour, too, Mr. Black's method being to plant out as much possible. The planting-out system has also been followed with decided success in the case of the temperate-house *Rhododendrons*. *Orchids* are well grown, not in immense quantities of given kinds, but as a general collection, both *Cattleyas* and *Dendrobies* being in evidence; so also was a splendid plant of *Angraecum sesquipedale* of the best variety. The *Nepenthes* at Carton are pictures of health, with a profusion of pitchers; these are grown in a light house and near the glass. Large plants of *Kentias* are grown for decorative uses in a lofty conservatory. Here also was noted *Papyrus antiquorum*—most effective. Fruits under glass are well cared for, Grapes of high-class quality being noted, especially some bunches of Mrs. Pince. Both *Peaches* and *Nectarines* are represented by large, well-trained trees. *Figs* also are of large size and in the best of health. The greater portion of the fruit houses is of the old-fashioned style, with steep roofs, which are not altogether so desirable as those with wider inside borders.

J. HUDSON.

THE CONFERENCE MANIA.

THE GARDEN has rendered a service to horticulture by calling attention to the proposed Sweet Pea conference, which seems to be more useless and unnecessary the more one thinks about it. Those who have undertaken its organisation have truly taken upon themselves a work of supererogation, and it is a pity that their energies should not be devoted to some more worthy object. The increasing tendency of the present age to specialisation is quite indispensable in most departments of activity, but in this case it will degenerate into the formulation of trivial and unimportant distinctions, the tabulation of slight differences in the case of a flower not at all adapted for this kind of treatment. One's feelings find spontaneous utterance in the words, "Pity the poor Sweet Pea." One of the simplest of garden flowers, one of the most popular and one of the prettiest, it claims multitudes of admirers, but any of those who think that a conference, commemoration, exhibition, banquet, &c., are really necessary must be considered to have developed an unwholesome mania for a flower which is by common consent one of the most charming. If the Sweet Pea could express its own feelings on this subject, it would doubtless reveal a deep anxiety that the present proceedings may end in failure through want of financial assistance or otherwise. There are some flowers that are represented by societies devoted to their especial interests—*Chrysanthemums*, *Roses*, and *Dahlia*s, for example—but in each of these cases there is very good reason for a society consisting solely of admirers of the particular flower. Their differences of form and colour are so great, that their admirers can render services to horticulture at large by fixing and developing the best types and improving them where necessary, as in the case of the *Cactus* *Dahlia* at the present time. What work of this kind is there for a Sweet Pea society to do? Are the individual flowers of the Sweet Pea large enough as now cultivated? Empirically, yes. Does any change in the form of the flower seem desirable? Certainly not. The plant both for the garden and for providing cut flowers is as satisfactory as can be desired. We shall have new varieties with colours different from those already in existence, but this work will go on just as well without any conference and the dire classification of this simple flower into groups of colour and form. To do this in the case of the

Sweet Pea is quite as irrational as it would be for the *Verbena*, *Phlox Drummondii*, *Scabious*, and other similar annuals. H.

ARUNDO CONSPICUA.

THE New Zealand Reed (*Arundo conspicua*) is one of the most graceful of all the grasses, bearing slender, arching, plume-tipped shafts 10 feet or 12 feet in length when planted in deep soil. By those whose knowledge of gardening lore is limited it is usually styled Pampas Grass, but the true Pampas Grass (*Gynerium argenteum*) bears erect and not arching shafts and lacks the delicate grace of *Arundo conspicua*, whose bending plumes spread outward far beyond the furthest limits of its narrow, drooping leafage. The New Zealand Reed attains its full beauty towards the close of July, whereas the Pampas Grass is not at its best until October. *Arundo conspicua* is not so hardy as the Pampas Grass, but a clump I know has withstood the effects of 20° of frost uninjured, though growing in deep retentive loam and in close proximity to water, which has on one occasion, during a prolonged autumnal downpour, covered its roots to a depth of 2 feet. Another highly decorative *Arundo* is *A. donax*, which bears tall pennoned shafts from 10 feet to 14 feet in height, its foliage being of a cool blue-green tint. There is also a variegated form of this plant which is most attractive in appearance, but which is more tender than the type.

S. W. F.

TREES AND SHRUBS.

TREES IN GREENWICH PARK.

CHESTNUT and Elm are the predominant trees in the Royal Park at Greenwich, the majority being of large size and in a rapidly declining condition. Evelyn tells us in his diary that the Elms were planted in 1664, but the Spanish Chestnuts are much older, although one of the avenues mainly composed of this tree was formed at the instigation of Charles II. The old Oak beneath which Henry VIII. danced with Anne Boleyn must in its heyday have been a tree of giant proportions, the hollowed trunk, in which Queen Elizabeth oft partook of tea, being fully 20 feet in girth. The tree is quite dead, and mainly supported by a thick coating of Ivy, which imparts to the majestic trunk a decidedly ornamental appearance. About half way between the Blackheath entrance and the Royal Observatory may be seen several very fine specimens of the Spanish Chestnut, but, indeed, all over the park this tree predominates, the deep gravelly soil being peculiarly suitable for its growth. The fluted trunk of a tree of this kind growing near the entrance to the deer enclosure and nursery measures no less than 23 feet 6 inches in girth at 3 feet from the ground level, and contains fully 180 cubic feet of timber. This is a truly noble tree, but, like many others in the park, it has suffered from the wind and after-neglect of long standing. Another equally fine tree growing by the main avenue leading to the Observatory is admired by visitors to the park, the immense bole girthing 20 feet at a yard from the ground and containing fully 200 feet of timber. The spirally twisted stems, many with immense protuberances at the base and curiously netted bark, are peculiarities of these Chestnuts which have attracted more than passing notice from artists and others. Perhaps the finest Elms are growing opposite the Royal Naval College and upwards towards Vanbrugh Castle entrance to the park, but,

generally speaking, the larger trees are in a very unsatisfactory condition, owing to old age, decay, and neglect. At one time (1660) the Elms must have been of no mean size in some parts of the park, for we learn that Sir William Boreman sold a number at £5 apiece. Of Oaks, the largest trees are in the deer enclosure and near the site of Greenwich Castle, on the Observatory hill. There is a record that some of the Oaks in 1660 were sold for £14 each, so that even at that early date the timber in the park must have been not only large, but of very good quality. In the grounds attached to the Ranger's house, and which were recently thrown into the park, there are noble examples of the Chestnut-leaved Oak (*Quercus castaneifolia*), purple Beech, common Hornbeam (finer than any at Epping), Tulip tree, Ailanthus, Amelanchier 25 feet high, and common Hawthorn. The last is one of, if not the largest in the kingdom, the height being 47 feet and the stem girth 5 feet 10 inches above the swell of the roots.

In connection with these trees it might be mentioned that, like the Cedar at Chelsea, trees which once did well at Greenwich cannot now withstand for a lengthened period the deleterious effects of the impure atmosphere to which they are almost constantly subjected. This, combined with artificial drainage consequent upon the making of the Blackwall and other tunnels, has in latter days had a most injurious effect upon the general health and appearance of the trees in the park.

A. D. WEBSTER.

TREES AND SHRUBS CERTIFICATED DURING 1899.

DURING the year 1899 sixteen different trees and shrubs received either first-class certificates or awards of merit at the various meetings of the Royal Horticultural Society. This was three less than in 1898 or 1897, as in each of these years the number was nineteen. Some of the subjects were by no means new, *Caryopteris mastacanthus* being an instance of this. Perhaps the finest plant of all the certificated subjects was that beautiful double Japanese Cherry which was given a first-class certificate on May 16. The following is a complete list, the names being arranged in the order in which the awards were made:—

***Prunus persica alba plena*.**—This is the double white-flowered Peach, a good form of which received a first-class certificate on February 28. The specimens exhibited were, of course, forced.

***Azalea mollis Purity*.**—A variety of *Azalea mollis* or *sinensis* in which the flowers are large and of a very delicate sulphur tint. The upper segments are slightly spotted with a deeper shade of yellow.

***Azalea mollis Betsy de Bruin*.**—The medium-sized blossoms of this are of an orange-apricot tint, spotted on the upper part with brownish crimson. Both these *Azaleas* received awards of merit—the variety *Purity* on March 13, and the other on March 25.

***Prunus pseudo-Cerasus James H. Veitch*.**—Under the generic name of *Cerasus* this charming Japanese Cherry received a first-class certificate on May 16. This honour was well bestowed, as it is one of the finest of this popular race. The deep rosy pink blossoms are double, each about a couple of inches in diameter, and borne in great profusion. The freshly expanded reddish bronze foliage serves admirably as a setting for the charming blossoms. Among other items they are later in expanding than those of their immediate allies.

***Acer pseudo-platanus elegantissimum variegatum*.**—A form of the Sycamore, in which

the leaves are variegated with creamy white. In a young state they are heavily suffused with reddish bronze. The individual leaves are pretty, but variegated-foliaged trees as they grow up have little to commend them. A first-class certificate was awarded this at the Temple show.

***Ilex Wilsoni*.**—A vigorous, bold-growing Holly, with long spined, oval leaves. It is said to have originated from seed, probably from the variety *Hodginsi*. *I. Wilsoni* is reputed to be an abundant berry-bearer. It received a similar award to the *Acer* and at the same time.

***Juniperus Sanderi*.**—Apparently a form of the variable *Juniperus chinensis*. An award of merit was given to this *Juniper* at the Temple show.

***Rhododendron Essex Scarlet*.**—A hybrid *Rhododendron*, bearing compact heads of rich crimson-scarlet flowers, upper petals spotted purple. This variety received an award of merit on June 13, doubtless owing to the extremely rich colour of its blossoms.

***Abies Douglasi pumila*.**—A close, compact-growing form of the Douglas Fir, with pretty bright green foliage. It is said to be a native of Colorado, and must be regarded as one of the most desirable of the smaller conifers. A first-class certificate was awarded this on July 25.

***Acer californicum aureum*.**—A form of *Acer Negundo* in which the leaves are of a pleasing shade of yellow. This colouring is intensified by exposure to the summer's sun. The long wand-like shoots, being of a glaucous hue, add a notable feature. It promises to be a good garden subject, as the tinting is not of that patchy character common to most variegated-leaved trees and shrubs.

***Cornus macrophylla*.**—A vigorous-growing Japanese species of Dogwood, with leaves 5 inches to 8 inches long and 3 inches to 4 inches broad, dark green on the upper surface and very pale beneath. In the autumn the leaves die off brightly coloured with red. The flattened clusters of creamy white blossoms are freely borne. It has not been long introduced, but in Japan is said to form a tree 50 feet to 60 feet in height, with a trunk more than a foot in diameter. The long branches, which stand at right angles to the stem, form distinct tiers, which when thickly studded with corymbs of flowers are particularly noticeable.

***Vitis Thunbergi*.**—A Japanese Vine in the way of *Vitis Coignetiae*, and, like that, remarkable for its autumn tints. *V. Thunbergi* has large wrinkled leaves, deep green above and covered with rusty hairs on the under sides. The leaves are in most cases slightly three-lobed. The last three subjects received an award of merit on July 25.

***Cupressus Lawsoniana Wisseli*.**—A very distinct variety of Lawson's Cypress with several erect leading shoots, somewhat after the manner of *C. Lawsoniana erecta viridis*, but the side branches are disposed at various angles, thus giving it quite a unique appearance. It is a neat, compact form of a pretty glaucous tint, and should be of service for small gardens. An award of merit was given this variety on August 15.

***Robinia pseudacacia inermis albo-variegata*.**—This differs from the ordinary form only in the leaves being freely variegated with silvery white. As shown, it was decidedly pretty, but it is questionable whether it will prove of much real service to the planter, as its variegation appears delicate. It received an award of merit on August 29.

***Retinospora obtusa aurea Crippsi*.**—Among the numerous varieties of *Retinospora obtusa* this must be assigned a prominent position, as it is in every respect a very desirable form. It is extremely graceful in habit, bearing long pendulous thong-like shoots, while the entire plant is of a rich golden yellow. It is said to retain its colour throughout the year, and this, in conjunction with its graceful habit, should render it one of the most desirable of golden

conifers. It was given a first-class certificate on September 12.

***Caryopteris mastacanthus*.**—A now well-known shrub, which was originally sent from China by Robert Fortune in 1844, then lost after a time, and re-introduced by Maries when travelling for Messrs. Veitch in 1879 or 1880. The flowers, which are borne in rounded clusters from the axils of the leaves on the upper parts of the shoots, are of a bright purplish blue, with prominent stamens. Flowering as it does in the autumn, its value is still further enhanced. The excessively hot season was in favour of this *Caryopteris*, which can only be considered moderately hardy in this country. T.

EVERGREEN TREES AND SHRUBS.

MUCH as we appreciate the varied forms and shades of foliage of a good collection of deciduous trees and shrubs, and the effect they produce at various times of the year, I find that without a judicious sprinkling of evergreens our shrubbery borders and woodland walks would not be half so attractive during the dull winter months. If it were not for the cheerful and lively hues of these much of our interest in country rambles during the dull period would be lost. The Ivy-clad ruins of an old castle do not seem to have the same charms when all around is bright and gay with the foliage of other trees as in the winter when these are bare; neither has the common Holly in our hedgerows the same attractions on a bright, sunny day as it has when the berries are ripe and the leaves are glistening with hoar frost. The Pine woods in winter present a different feature in the landscape than in the summer when their closely-set fine foliage does not come into contact with that of more attractive hues. These, however, are only a few of the many features that evergreens possess. There is such a number of Hollies that these alone form a very interesting study, to say nothing of their usefulness as shelter for other less hardy plants. The common variety makes a splendid hedge, as most people know, and will stand clipping better than many evergreens with such large leaves. It is not often, however, that we see a hedge of the yellow-fruited form (*flavum*), but well grown this is very attractive. Not long ago I saw a belt of this about 12 feet high leaved with bright yellow berries, which was very attractive. Then there are so many forms with variegated foliage, and these for the most part are well set with berries, which during the present wintry weather are very attractive. *Laurifolium* does not usually fruit freely, but this year the berries are thickly clustered round the stems, which form a fine contrast to the large light green leaves. Though berries, as a rule, are not so plentiful this season, there are some bushes that are well laden with fruit. The bold foliage of some of the Barberries is very attractive, especially where these do well and are fully exposed. *B. japonica*, or, as it is sometimes called, *Beali*, has very large, deeply-cut leaves, and when grown to a good-sized bush is very attractive from this time onward, as it is one of our earliest shrubs to bloom. *Aquifolium*, too, is most useful for planting under the shade of trees and covering bare patches on sloping banks where little else will grow. This is not at all particular as to soil or situation, though in exposed places on the chalk the foliage assumes a bright colour in the autumn and is much sought after for cutting. It seems rather strange that the *Kalmia* does not find more favour in our gardens. It is one of the hardiest evergreens we have, and, though it will not succeed on chalk, will grow in almost any other kind of soil. The flowers, too, of many of them are very attractive. There is such a variety of forms of the *Andromeda* that these alone would be well worth a piece of ground devoted to their cultivation. There is so much difference in their habit of growth, shape and colour of foliage that one would scarcely think they belonged to the same class. *Arborea*, *Catesbaei*, *japonica*, *speciosa*, *horibunda* and *calyculata* are all worthy of a

place. Amongst the Box tribe there are also many useful forms that will grow where little else can be planted. On the chalk these thrive in a most remarkable manner; even where there is but little soil to cover their roots plants seem to be at home, while on a deep loam they grow freely. Balearica, with its large shining leaves, is very distinct; there are also several of the variegated forms that are attractive, all of which form neat, compact bushes. Phillyreas are so hardy that no amount of frost seems to injure them, and though not so useful as some other plants, they are very serviceable for planting in exposed places. Being of slow growth, they do not soon become unsightly. Some of the Oaks, too, are very attractive and form dense trees, being very hardy, particularly Quercus Ilex, which withstands the sea breeze better than any other evergreen shrub. There are many others, but mention is made of those which are perfectly hardy and will grow in any part of the kingdom without the least protection. H. C. P.

CHRYSANTHEMUMS.

CHRISTMAS CHRYSANTHEMUMS.

At no time are these flowers more valued than in mid-winter. From a market point of view they then become a paying crop, and no gardener can afford to neglect them. Apart from proper attention to culture, the selection of suitable varieties is of considerable importance, as only a few kinds will prove satisfactory so late in the year. White being the most useful colour, I will take these sorts first. L. Canning had for a number of seasons a great run, and it is certainly a first-rate white when well done. Dwarf in growth, free, and the blooms pure, as well as of good shape, it has every good quality, yet many find it a bad one in the matter of lasting when cut. Many find, too, that the variety in some seasons has a habit of producing blind buds. Thus, faults like these are causing a considerable number of growers to discard it. Niveum is a much better variety, as it is more constant and quite as late as L. Canning. By striking batches of cuttings as late as May, one may get this kind to last in bloom until February. It is very fine when the plants are not disbudded, or rather if the bloom-buds be not thinned. If rooted early the plants should have their shoots topped, otherwise it rarely forms a natural bushy specimen. Western King, a seedling from the last-named, is a very pure white, and the blooms are of fine quality. These incurve slightly, whilst those of Niveum reflex. Both kinds are first-rate for the supply of Christmas flowers. A sort much favoured is Mlle. Thérèse Pankoucke, a free but rather tall grower. The blooms have stiff stems and are elegant in form. Market growers favour this on account of its lasting qualities, besides the other merits. One of the latest and best is Princess Victoria. The plant is strong and forms a good bush, and the flowers last well when cut. Lady Lawrence, an old variety, is still excellent for late flowering. The white is pure and the florets incurve slightly. The plant, however, is not among the easiest to cultivate. Mrs. H. Weeks, a noble exhibition kind, is also useful when grown to produce late flowers, and, like Niveum, it sends forth blossoms a considerable way down its long branches, in which state the plant is very effective in the conservatory. A sort generally known as an early one, Souvenir de Petite Amie, is first-class late in the season from the terminal flower-buds. The plant is so dwarf and free that it has advantages over most varieties we grow. A late pompon, Snowdrop, should not be overlooked. The tiny blooms come so freely as to make it excellent for decoration.

Sports have been obtained from Niveum, Western King, Lady Lawrence, and Snowdrop. They are all light or sulphur-yellow, therefore hardly deep enough in shade of colour to be of much use, more especially under artificial light. The most favoured yellow—at least for market—

is Major Bonaffon. I am not impressed with the formation of its blooms, but the colour is rich and the flowers last and travel well. The florets are short, and incurve. As a plant it is especially dwarf and free. Golden Gate is a favourite late yellow. The blooms are elegant in form and the plant generally has every good quality. Another well-known kind for a late supply is W. H. Lincoln. I like the growth of this, but would welcome a sort of similar habit with better flowers. The colour is rich, but the petals are quill-like and wanting in grace. Phœbus might well be tried for late work. It is first-rate in any form. A few large bush plants of this variety in fine flower I recently noted. This and Souvenir de Petite Amie form a capital pair—yellow and white. King of Plumes should be grown for its lateness and for the wealth of small, elegant blossoms.

Late pink varieties are not abundant. Much the best is Mme. Felix Perrin, which keeps its colour well. The plant is rather tall, but free-flowering. Liability to fade is the fault of most of the crimson-flowered kinds. The old Julie Lagravère is valuable for late flowers, these keeping their deep shade well. The blooms are comparatively small and the plant dwarf and free. G. W. Childs is also excellent. The blooms of this are of pretty form, but the plant wants careful culture. Its roots are tender and will not stand much feeding. J. Chamberlain is a recent variety, which may be tried for late flowering. The colour stands well, and the plant grows freely. Tuxedo is a tall-growing variety, but there are none of a bronzy shade more useful than this late in the year. Master H. Tucker produces blooms of a brown-crimson shade, which lasts well. Although somewhat tall, this kind should not be neglected for late supplies of bloom. Matthew Hodgson, a bronzy red, is a capital late sort. The growth of this is dwarf and bushy. H. S.

NEW CHRYSANTHEMUMS.

Not for some years past have so few novelties in Chrysanthemums been seen. This, perhaps, is partly due to the fact that, properly, a much higher standard of excellence is required than formerly before the award of a certificate is given. Another reason is that many of the best of the French novelties are not placed before the committees the first year, because three blooms must be obtained. Few persons are bold enough to purchase a sufficient number of plants at a very high figure to get these; hence one must see the leading traders' collections to form an opinion as to which of the many new sorts are likely to be improvements upon existing ones. Of English-raised new kinds, Florence Molyneux has been exhibited in first-rate form. It is a white incurved Japanese of immense form, probably the biggest variety of any. I have not seen the plant growing, but one can imagine that it is a sort like Mrs. H. Weeks, requiring a long time to develop its flowers, and satisfactory only when one single bloom is allowed to a plant. Edith Pilkington, yellow, with bronzy tint, is a wide-spreading flower, not unlike Ella Curtis. Mrs. Bagnall Wild has blooms of a pretty shade of pink. These incurve and build up a noble blossom. Vicar of Leatherhead is a yellow variety, the florets drooping and long. It is full and large; thus a useful kind, although it is scarcely distinct from many another. Mrs. A. G. Hall is said to be a seedling from that excellent variety Edith Tabor. The new one, however, has a better habit of growth. It is bronzy yellow in colour, large, full, and graceful in formation. General Symons belongs to a class difficult now to distinguish. It is rather closely incurving and not extra large, so that instead of classing it as a Japanese it is called incurved. Its colour is a pretty buff shade.

Australian and French-raised kinds afford better material than the above in the way of novelties this year, and a considerable number of these will be highly esteemed when better known. Of the

former, G. H. Kerslake Jun. is first-class. It is white, and in shape not unlike Mme. Carnot, but the habit is especially dwarf and sturdy. J. R. Upton is a handsome Japanese variety of a bright shade of yellow. The form of this is drooping. The florets are of great length, and the blooms grow to a large size. It is a sturdy grower. Lord Ludlow is not quite new, but is a variety of considerable importance. The colour, a bright yellow, has a distinct edging of red in each floret. The sort lacks nothing in size and beauty of form, whilst the growth is of a sturdy nature. Walleröo, a slightly incurving form of a purple shade, bears large, handsome flowers when disbudded, and is also excellent if produced in quantity. Of continental varieties, Calvat 1899 is of great beauty. A soft shade of yellow tinted mauve would describe its colours. The bloom is large and rather incurving in form. When sprays of flowers are allowed to develop it is one of the choicest things seen for a long time. Mme. Henri Bernard has blooms of a bright rosy purple, in which white lines run most distinctly. The formation is drooping and a full, showy flower is obtained. Mme. C. Terrier has flowers of a charming rose tint. The florets are long and hang in a graceful manner; the growth of the plant is dwarf. M. H. Martinet is a variety of much promise; colour, a mixture of crimson and gold, as in the well-known, but difficult kind, E. Molyneux. The flowers are large, full to the centre, and especially rich. It is a dwarf, sturdy grower. This should become a popular kind. Although white Chrysanthemums are numerous, Princesse Bessarabe de Brancovan is an improvement in that shade. The quality of the bloom is first-rate, and the growth dwarf and branching. This is likely to surpass that magnificent variety Mrs. J. Lewis. Roselyn is a gain in colour; the shade is violet-red. The blooms are large, of a spreading form, and full and deep, quite a fine type. W. Wells will, I suppose, be classed as an incurved; its shade of amber-yellow is rich and pleasing. This variety is an excellent addition. For growing in sprays it is most striking. Zephoris is a broad-petalled, full, deep Japanese flower of a bright yellow colour. This, like the foregoing novelties, has a dwarf habit of growth, not the least pleasing of the characters noticed in varieties of recent raising. H. S.

Chrysanthemum Mme. R. Cadbury.—This is a distinct advance in all that pertains to quality in a flower. Apart from the striking purity of the white, the flowers are remarkable for substance, the florets being thick and leathery. They are also broad and long, forming a large, recurving-shaped bloom of much richness. There is not a doubt about its becoming a popular late-flowering kind when known. I can only judge of its being a late one from the fact that in each of the past two seasons the raiser has exhibited it in December. Its value, therefore, from an exhibitor's standard may not be so great as it will be to growers generally who welcome choice flowers late in the year. It is an English raised seedling.—H.

Hardier Chrysanthemums.—The note by "H. S." in THE GARDEN of December 16 was not unexpected. Unless I am mistaken, the initials are those of one whose opinions on the subject of Chrysanthemums are of immeasurably greater weight than those of the writer of the present lines. I venture to think, however, that the prospect of the introduction of hardier Chrysanthemums is not so hopeless as he thinks. I am not, I trust, unduly optimistic in attributing to Chrysanthemum raisers the ability sufficient to enable them to give us plants and flowers of greater power of resistance to frost than we have at present. The years during which the Chrysanthemum has been so largely grown under artificial conditions can hardly fail to have had some influence in making its progeny less hardy. Nor can it, one would think, be argued that the developments of the modern Chrysanthemum have made it equal to the older flowers in ability to

stand rough weather. If we are to have plants capable of remaining in flower at a late season, it is only reasonable to think that we must be content to sacrifice something in the way of the magnificence of the flowers produced under glass. I fear that the early-flowering varieties will hardly serve the purpose for which we want the later blooms. There is generally a short spell of frosty weather in autumn, sometimes only for a day or two, but enough to destroy their beauty. What is wanted is a race which will not open its buds until about November. Those who have tried the Chrysanthemum in the open can observe that there are varieties of greater hardiness or having flowers so constituted as to be less liable to injury from frost than others. Is it impossible to raise from these a race which will possess these qualities in a greater degree? I do not think so; but I do not anticipate that success will come from working on the lines which have in the past given results so remarkable. A race of hardier Chrysanthemums would be a boon to thousands. —S. ARNOTT.

NOTES AND QUESTIONS.

Chrysanthemum Miss Alice Byron.—White varieties are so numerous that there hardly seems room for more, yet this one is distinct. It is pure white, large, and solid, the shape incurving. The petals are broad and remarkable for substance. It reminds one of Louise, not the least handsome of Japanese forms, only white and most exquisite in richness and finish. For exhibiting in November the variety should take a leading place, and, now that vase arrangements are coming into use, this introduction gives a variety that would form a chaste exhibit in a vase. —H.

ORCHIDS.

TEMPERATURES FOR ORCHIDS.

It is usually understood that the grouping of Orchids in proper temperatures, classifying them, as it were, and keeping each particular section of a genus to its own house or compartment, are very essential, and likely to lead to their successful culture, all other conditions being correctly attended to. With all the outcry against collectors and nurserymen who withhold the habitat of a species lest rivals in the field should get hold of it, it would appear to be considered a very important point. But when one sees a small collection sometimes and finds plants from all quarters of the globe thriving and flowering in one house, it really seems as if this temperature question had been made a little too much of. It took us a long time to convince ourselves thoroughly that Cymbidiums of the giganteum and Lowianum section were more satisfactory in cool houses than hot ones, yet the fact is now fairly generally accepted. But fine plants have been grown, and still are grown, in heat, thus showing that this particular section is not fastidious as to temperature. Quite recently in a Norfolk collection I saw some remarkably fine basket specimens of Mexican *Laelias* thriving and in the most vigorous condition in the same house as a general collection of heat-loving *Dendrobiums*, *Aerides*, *Vandas*, and a host of others. *Odontoglossum grande*, *O. pulchellum*, and several others were on the back stages in the same house, but it is only fair to add that these and other cool Orchids had been grown outside in a cool pit during the summer.

Then there are many instances that could be cited of plants usually considered to need a great deal of heat, and difficult to grow at that, cropping up in some out-of-the-way place in splendid health in a cool house and *vice versa*. It will usually be noted in these cases that the plants come in for a good deal of watchfulness and care on the part of their owners, and by a

close study of their habits, the growers have been able to anticipate their every want almost in the way of compost and watering. I believe that this close attention—by which I do not mean the silly and reprehensible practice of being always pulling the plants about—on the part of those in charge does a lot to remedy any slight mischief that may occur through the temperature not being suitable. To take Orchids as a whole, there can be little doubt that the temperatures, generally speaking, are kept too high. Some species there are that cannot be grown without heat, but many would be far better in cooler quarters than are at present allowed. H. R.

NATURAL HYBRID MILTONIAS.

WESTERN SECTION.

MILTONIAS, considering the small number of species, have an exceedingly large proportion of intermediate forms. This fact no doubt is explained by the particular construction of the flowers of this genus, rendering them easy subjects for insect fertilisation. One of the first supposed natural hybrid Miltonias was

M. fastava, which was described by Reichenbach in 1868. It appeared to have been lost to cultivation after 1877 until a plant flowered in the collection of Mr. R. I. Measures at Ladymead, East Harting, Sussex. In 1894 a plant was exhibited at the Temple show. It undoubtedly is derived from the intercrossing of *M. spectabilis* and *M. flavescens*. The creamy yellow sepals and petals are rather broader than in *M. flavescens*. The lip is very similar in shape to that of *M. spectabilis* and light purple. The growths are flat, as in the last-named species.

M. Blunti is one of the most beautiful and desirable of the natural hybrid Miltonias. It was sent home by the collector whose name it bears in 1879. It is a supposed natural hybrid, and partakes of the intermediate characteristics of *M. spectabilis* and *M. Clowesi*. The sepals and petals are creamy white with some reddish brown blotches in the central area, the broad front lobe of the lip white, suffused with crimson at the base. The variety

M. B. Lubbersiana appeared in 1877. The flowers are larger and more beautifully spotted than in the typical form. It is a choice and most desirable variety.

M. B. Peetersiana differs from the typical form in the fact of its having *M. s. Moreliana* as one of its parents. This variety has the dull purple suffusion and veinings of *M. Moreliana*, with indistinct bars as seen in *M. Clowesi*. It is a scarce and desirable addition.

M. Binoti is supposed to have its origin between *M. candida* and *M. Regnelli*. The sepals and petals are creamy white, tinged with lilac at the base and barred with light brown; the lip rosy lilac. A plant was exhibited at the Royal Horticultural Society's meeting, September 20, 1898, from the collection of Sir T. Lawrence. The same exhibitor also showed on that occasion

M. leucoglossa, one of the most distinct and beautiful varieties I have seen. It has creamy white sepals and petals, sparingly spotted with violet; the lip white, with the exception of a few purple markings around the crest.

M. Lamarckiana (*M. Clowesi* × *M. candida*) was exhibited at the Drill Hall and received an award of merit on October 15, 1895, as *M. Cobbiana*. It first appeared in and was described from the collection of M. Lamarck de Rossius, president of the Société Royale d'Horticulture de Liege, in August, 1874. In 1893 a variety appeared in the collection of Major Joicey, Sunningdale Park, which was exhibited and received a first-class certificate on August 8 of that year as

M. Joiceyana.—This is not sufficiently distinct to be separated from *M. Lamarckiana*, only as a variety. The sepals and petals are much like those of *M. Clowesi* both in shape and colour; the lip is much larger and broader, the front lobe

white, shading to purple on the basal half. It is a rare and desirable variety. H. J. C.

Cattleya Percivaliana.—Though not so large as many others of the *C. labiata* group, the lip markings on this *Cattleya* are very beautiful and effective. It usually only opens partially until the plants are strong and well established, but when well cultivated and vigorous this fault usually disappears. Its general culture differs little from that of *C. Trianae*. It should be started into growth after the flowers are past and encouraged to finish up early while there is yet time to thoroughly ripen it by exposure to sun and air in autumn.

Ceologyne Gardneriana.—The pendulous flower-spikes produced by this *Ceologyne* are very handsome and make a fine display at midwinter. When in good condition the plant grows freely and flowers abundantly, but it is apt to be attacked by insects, especially thrips, if kept in an over-heated or dry atmosphere. It flourishes well in a collection not far from here in the shady part of an intermediate house, and this is the best place to grow it. A free supply of moisture is necessary during the growing season, and the compost may consist of equal parts of peat fibre and Sphagnum Moss. Grow it in baskets in order to show the habit to perfection and see that these are well drained. —H. R., *Bury St. Edmunds*.

Vanda Amesiana.—This very distinct and beautiful *Vanda* is now flowering in many collections, and as a winter-blooming subject would be hard to beat. In its thickened cylindrical leaves it is like a stout form of *V. Kimballiana*, to which pretty species it is closely allied. In an intermediate house the plant will generally be satisfactory, and it should be grown in small baskets suspended from the roof. Here it obtains the full benefit of all the light and the best of the air currents at command, this producing a solid, free-flowering plant. All these mountain plants like this treatment; they cannot stand being stewed up in a close, badly-ventilated structure, or one in which the air is not constantly being changed. The flowers appear on erect racemose spikes, are fragrant, varying in colour from quite a deep rose-purple to nearly white. After these are past, the plants as a rule take a short rest. I say as a rule advisedly, for some specimens seem always inclined to grow, and can only be induced to rest by force, which is harmful. In their native haunts the plants are said to shrivel considerably, but it is not advisable to go to such extremes under cultivation. Such treatment—by many misnamed rest—is very weakening and harmful to the plants and is unnecessary. *V. Amesiana* is a native of the Shan States.

CHRISTMAS DECORATIONS.

AT this season of the year a walk through the central avenue of Covent Garden Market affords the best possible means of seeing what materials are at our disposal for the embellishment of our churches and our homes. With that tenacity with which we cling to all old institutions, our thoughts turn again to the Holly and the Mistletoe. But now we want choice flowers, delicate exotics, as well as the good old English Holly, and here in the market they are to be found in abundance and much variety—the Arum Lily, whose pure spathe does not confine its chaste splendour to the summer months; Lily of the Valley, whose retarded crowns have sent up many a tender spike to cheer the dark September days, followed by a leaf of sickly green, deprived by lack of sunshine and air of that healthy appearance that is natural to it; Roman Hyacinths and Paper Narcissi, reminding us of the spring days that are to come; early Azaleas and other flowers, with the last of the ever-popular Chrysanthemums, scarlet Geraniums and Carnations to add bright and warm colours to those that are at our disposal.

Nor is the supply of foliage less profuse. Holly, both the red and yellow-berried forms, must be used in quantity. But we have also Berberis foliage, with its exquisite brown and bronze tints. The Box and the Yew must not be forgotten, whilst *Ruscus racemosus* will be found very useful, even for use in large vases with flowers of different kinds. A supply of Pampas Grass plumes will doubtless have been secured in the autumn, and perhaps some of *Arundo conspicua* as well. The common Reed Mace (*Typha latifolia*), and the finer varieties, such as *T. angustifolia*, well mingled with it, produce a very fine effect in large vases with the plumes of Pampas or *Arundo*. Long dried sprays of *Humea elegans* may be mixed with these to add a little colour; they are also in themselves quite graceful. Spikes of *Echinops* and *Eryngium* cut from the herbaceous border in the summer, with as long stems as possible, are very serviceable in the winter months. In a similar way the native Sea Holly (*Eryngium maritimum*) may be used effectively. Its dwarf, much-branched, bluish spikes are very elegant. The dried catkins of the Winter Cherry (*Physalis Franchetti*) can be mixed with any arrangement of the Grasses, &c., that have just been mentioned, in order to give colour if desired. On rare occasions the Stag's-horn Moss is found flourishing so luxuriantly that quite long sprays of it can be obtained, and if carefully dried these can be used for trailing down the sides of large vases. An excursion to parts of the English Lake district would afford an excellent opportunity to secure a supply of this. It should be remembered, too, that *Asparagus plumosus* will last very well for two or three weeks when used in this way and kept dry.

The Ivy has not yet been mentioned. How useful this is always found to be in all kinds of church decorations, whether at Christmas or even during the harvest festival season! What better decoration can be devised for a stone or marble pillar than a narrow spiral of trails of Ivy guided round and round the column like the thread of a screw? How easily, too, the Ivy lends itself to the formation of a frame of foliage round any formal circumference; to enclose a pulpit panel, for example. If any string or wire has to be hidden, nothing is simpler than to use a single piece of Ivy.

In the arranging of our flowers, let us not forget the oft-repeated warning to beware of over-crowding, of mixing many different things together, or of using flowers of a considerable size with short stems and putting them into small specimen glasses, as though they were show Dahlias or Chrysanthemums intended for exhibition in the orthodox manner. Suppose that half a dozen Arum Lilies are at our disposal—the best effect will be produced by arranging them boldly and loosely with long stems in a large vase, with a little of their own or other suitable foliage. These handsome flowers are only spoilt by being crowded with short stems amongst a lot of other kinds in an undistinguishable mass, or placed in a wreath in a mass of white so that their own outline is lost. To fill a small specimen glass, let us take a few sprays of Lily of the Valley, with two or three of its own leaves. The result is a beautiful yet simple arrangement. Chrysanthemums are still to be obtained in various sizes; these are some of the easiest flowers to arrange. Various kinds of foliage may be used with a good result, if only over-crowding is avoided and the colours chosen do not clash. Whites and yellows will be found the most serviceable.

If these simple principles are adhered to, all our churches and homes, rich or poor, may be

made beautiful during the coming days of rest and rejoicing. H.

Potting Ferns loosely.—Where the aim of the grower is simply to get a quick growth irrespective of solidity of texture in the fronds, this may easily be brought about by loose potting and ample warmth. For instance, when bringing on small seedlings or plants from division to a useful size they may be treated in this way, and if slightly hardened by exposure for a few days to a lower temperature and drier atmosphere they will stand fairly well for decoration. Most of the *Adiantums*, for instance, especially *A. cuneatum*, when treated like this make very rapid progress, and the same is true of *Pteris serrulata* and its varieties and *P. tremula*. The latter does not, of course, lend itself to propagation by division to any extent, but the former kinds do, and very rapidly. In breaking up the plants it is well not to shake them out more than can be avoided, simply breaking apart being a better method. Before potting it is as well to lay them out on a moist stage or on a tray, with a little prepared Fern compost, to strike root a little before potting. At first very little water is necessary, but when the roots have obtained a hold on the new material the loose condition of this will necessitate frequent moistenings. In this way a large stock of useful plants may be rapidly grown.

ROSE GARDEN.

ROSES FROM CUTTINGS AND LAYERS.

CUTTINGS of Roses are made in September from branches that, having flowered or not, are already half-ripened. The cuttings are made with three or four eyes—less if need be—and cut very clean below the last eye, and if possible with a heel or enlargement at the base of the branch on the stem which bears it. All leaves are cut down to their petiole. Before, however, making cuttings, a small plot of land should be carefully prepared on the north side of a wall or hedge in a somewhat warm place, though sheltered from the sun, and well mixed with sand to prevent retention of moisture. If bell-glasses are available, the places they are to occupy are marked by pressing them against the soil; in the absence of these, a shallow box covered with a single sheet of glass will answer the same purpose. The holes for the cuttings are made within the circumscribed space with a dibble at distances of a few inches from each other, and the cuttings are inserted to their middles and the holes filled up. The soil is then watered with a fine rose and the bell-glasses or boxes are put in place. The cuttings should afterwards be inspected at intervals for the removal of fallen leaves and dead cuttings, and watered if required. At the end of five or six weeks many of them will have taken root and even commenced to grow. Let them do this with out removing the bell-glasses, so that the backward cuttings may take root in their turn. The growth cannot in any case be other than very restricted, as winter will then be close at hand. The cuttings will pass the winter under the bell-glasses, and care should be taken to surround these with leaves or straw, covering them, if need be, all over to protect them from severe frost. In the spring remove these extra precautions and air the plants a little by lifting the glass. When the slips have begun to put out shoots and the roots are active, remove them to small plots in the temporary nursery, or even at once to the places they are to occupy if this allows of their being attended to. Most of the cuttings will flower in the same summer and afterwards become handsome, lasting plants.

However, all varieties do not root equally well, Teas and Noisettes being somewhat difficult as cuttings, and here layering comes to the amateur's assistance by enabling him to propagate the most difficult varieties. It is extremely simple. The best time to make layers of Rose plants is the autumn. The longest branches are chosen for this purpose. These are laid in in a small trench 4 inches to 6 inches deep and kept in place by means of small wooden pegs. To make sure of and hasten the formation of roots it is well to make under an eye in the buried part on the upper side an incision to the middle of the wood for half an inch or so. This is known in gardening as layering with incision, and is applied to certain plants, notably to Carnations. Layers thus made sufficiently early take root before the winter, or at least form a callus. In the spring or summer, when they begin to shoot, the mother branch is cut first to the middle of the wood, then altogether, and as soon as the plant can support itself it is lifted with its ball and placed in the position it is to occupy.—S. MOTTER, in *Gazette de Village*.

NOTES OF THE WEEK.

Acacia penninervis.—This is one of those having globular heads of flowers and singular-looking as well as decidedly strap-shaped leafage. In many species the foliage, or rather the general effect of the leafage, is very striking and beautiful. In this kind, however, its leafage is more picturesque than beautiful, and here and there its little globular heads, that rather add to a general quaintness of form, are distributed.

Primula Reading Blue.—So far as size and colour are concerned, the above is one of the finest of its race yet raised. It is of the so-called giant race, all of which are notable, not merely for size, but for the fine form of the individual flowers. With these improvements the very desirable quality of sending the spike or truss well above the foliage is a point also achieved, with the result that a handsome pot plant is secured.

Rhipsalis cassytha.—This is a very curious-looking plant, the nearly transparent berries of which may almost be taken for Mistletoe. Rather less in size perhaps and somewhat more clear, there is still a similarity all round that is more than feebly supported by the very position the berries occupy on the nearly or quite succulent stems. It is a curious-looking plant, and little bushes of a few inches high usually carry a fair number of the berries referred to.

Chrysanthemum Owen's Brilliant.—I have at the present time (December 19) some good blooms of the above-named variety not quite full out. It is the darkest crimson variety I have seen. It is of about the same size as John Shrimpton, but grows a little taller. It is very shy of throwing up cuttings, which, perhaps, makes it so scarce, as one hardly ever sees it in a collection of Chrysanthemums. It makes a good companion to Golden Gate and Niveum. I fear these medium-sized Chrysanthemums are being overlooked for the large-bloomed varieties. The medium-sized blooms are the best for cutting, as the petals are not so long, therefore the flowers stand better when cut.—W. DANIELS.

Chrysanthemum Letrier.—The group of this brought to the last meeting of the Drill Hall committee for the present year attracted a good deal of attention. Grown in bush form and not 4 feet high, it appeared an ideal kind both for bush and late work. It would in some respects appear superior to L. Canning, a kind that frequently shows a black eye, which materially detracts from its value as a white flower. In no bloom did we note this defect in the variety Letrier, which, being of the same type as Niveum and L. Canning, usually display this defect quite early.

Chrysanthemum Mrs. J. Thompson.—When grown freely there is a strong likeness between this and that much older and, perhaps, rather later-flowering kind, Lady Lawrence. The

similarity is, however, more on the surface than real, for a touch of the petals reveals the fact that the above is devoid of the paper crispness that is not merely a characteristic of the latter, but that greatly assists to its longevity. For purity, however, the above is well worth noting, and equally so for its lateness. Add to these its better habit of growth and its greater vigour of constitution, and you have many of the requirements of a good late white embodied in one and the self same plant.

Woodwardia radicans.—In large conservatories this handsome Fern is often very striking, the huge and finely arched and well-proportioned fronds stretching out several feet from the crown and again descending to the earth, there again quickly to mature a future crown and plant. The plant is at home in the cool conservatory, and where freely in growth is not easily overdone with moisture. To some extent this much would be assisted by the position the plant should occupy, and this, owing to the nature of growth, should always be elevated. At the same time a large pocket of soil should be provided for the roots, as these, in common with the handsome fronds, are strong and vigorous.

Reinwardtia trigyna.—One thing that renders this plant more than usually attractive is the richness of the golden orange blooms, few of this colour being found among the usual run of winter-flowering plants, and not merely in colour, but equally for the great profusion of flowers is the plant welcome. It is usual to raise stock from cuttings, but anyone able to secure seeds will find the resulting plants of a more vigorous type. Occasionally when the plants are grown under too dry atmospheric conditions red spider attacks result, and these must be guarded against. The cuttings taken from old plants that have been infested will render a renewal more certain, and in any case a watch must be kept over the plants. By growing in cool pits during summer and using the syringe freely there is hope of keeping the pest in check.

Two indispensable Chrysanthemums.—The ordinary gardener who has to supply large quantities of cut bloom has to ignore many of the grand exhibition varieties, which are all very well if disbudded to a single flower on each stem and liberally fed. But, grow the same sorts in bush form or for quantity, practising little or no disbudding, and disappointment is in store. There are two very old varieties which cannot be dispensed with, as, given well-grown plants, one may cut and come again, and for beauty either in the conservatory or cut, few equal them in their respective classes. I refer to Julie Lagravère and the Anemone pompon Marie Stuart. The latter is not only exceedingly beautiful in drawing-room glasses, but such a vigorous grower, that from a spring-struck cutting large bushes may be grown.—C. N.

Fuchsia pumila.—Winter brings to the grower of hardy flowers many doubts regarding the lives of the plants he has obtained under the impression that they are able to withstand the

vicissitudes of our seasons. Many of these plants only bring disappointment in this. Sometimes the first winter proves fatal, but often they only succumb when an unusually severe season comes. Those of similar tastes can do much to aid each other in advising what to grow and what to avoid. The Fuchsias are mostly so graceful in habit and flower, that those which are hardy ought to be more widely grown. Among these may be included the pretty little *F. pumila*, whose slender, dwarf habit and bright flowers render it a favourite plant for the rockwork or the border. It is, we are told, a variety only of *Fuchsia macrostemma*, and it closely resembles in its general appearance the variety *gracilis*, but is dwarfer and smaller in all its parts. I have seen it in a good many districts, and in all of these it is considered as hardy as it is here.—S. ARNOTT, *Dumfries*.

Malvastrum Gilliesi.—One seldom sees this pretty little Mallow-wort even in large collections of alpine flowers. It is, nevertheless, a neat little plant, albeit it does not appear to be long-lived in many gardens. It is, I believe, hardy enough, but I am inclined to think that it requires to be propagated occasionally or the old plants will die out. It is of trailing habit, the trailing shoots emitting roots as in the Strawberry. Old plants appear to become exhausted, especially if the soil is too dry. It grows about 6 inches high, and has pretty, neatly cut leaves and a number of purple-crimson flowers. It is still met with in a few catalogues under the name of *Modiola geranioides*, but *Malvastrum Gilliesi* is recognised as the correct one. I grew it here for several years and found that it did not suffer in winter, but that dry summers were very injurious to it. It requires sun, but I am of opinion it does best with a fair amount of moisture at the blooming season.—S. ARNOTT, *Carsethorn, Dumfries*.

Epimediums.—At this season one is attracted by the foliage of one of the Barren-worts, which reminds us of their gracefulness in spring and summer. One thinks that a brief note may be serviceable in drawing the notice of some to these flowers, so that they may be remembered when plants are being obtained in spring. The one I observed in my garden to-day is *Epimedium pinnatum*, whose leaves are as fresh and green as if the frost we have had did not come near them. It is a pretty species with clusters of yellow flowers in racemes in summer, and grows in light soil to nearly 18 inches in height. The young leaves of the Barren-worts are prettily coloured and are thus very attractive. *E. pinnatum*, which comes from Persia, is one of the finest of the genus. *E. alpinum*, which is naturalised in Britain, is also pleasing with its crimson and yellow flowers. *E. macranthum*, with white flowers, is perhaps the finest of all, but the dwarf *E. Musschianum*, although not so pure, is one of my favourites. One great merit of the *Epimediums* is the way in which they thrive in shade. Even under trees, where not so many plants flourish, the Barren-

worts seem quite at home. For naturalising in woods they are of great value. I know a bank, by the side of a small lake and under the shade of overhanging trees, on which *Epimedium alpinum* has been established and where it forms a pretty picture against the other vegetation on the bank. These plants prefer a peaty soil, and in such soon increase. They do fairly well in the border, but look their best when planted in a more natural way among other herbage of dwarf growth.—S. A.

Gaultheria procumbens.—We have had several falls of snow, alternated by thaws which have carried away the most of the wintry covering of the flowers. As I write, here and there appear green patches showing objects of interest to flower lovers. On a small level at the shady side of a rock garden and in moist, peaty soil one observes a nice little patch of *Gaultheria procumbens* (the Partridge Berry or Canadian Wintergreen). It is pretty at all seasons, though one usually needs to examine it a little closely when in bloom if he wishes to see the beauty of its waxy-white, drooping, bell-shaped flowers. At this time its attractions are more evident. The flowers have departed, and in their place have come the pretty little berries, whose red colour is so acceptable amid the snow. I believe they are edible, but one feels unwilling to test the statement, not from any fear of the consequences, but because of unwillingness to deprive the plant of any of its beauty. Perhaps the birds will be a little less scrupulous. The red berries are, however, not the only charms of the "Canada Tea," as it is also called, as the leaves are now prettily tinted with red as well. *Gaultheria procumbens* is so dwarf, that even those who have but little space can grow it without its being out of place, while the largest garden can find a place for it in a shady spot in sandy peat or loam. It is, we are told, found in the sandy places and cool, damp woods of North America, and grows there in the shade of evergreens as well. Had it been a now plant, this creeping Wintergreen would have received more notice than it does. The beauty of plants which have been long introduced to British gardens is often unobserved, while we speak with glowing terms of novelties often of less value. *Gaultheria procumbens* came to British gardens as far back as 1762. It deserves to be found in many in which it has not yet a place.—S. ARNOTT.

The lerot.—The lerot, I find, is known in common parlance as the garden dormouse, and scientifically as *Myoxus nitela*. It is well known on the Continent as a destructive pest to fruit. The dormice are not true mice, and belong to quite a different family, being in certain characteristics more like squirrels.—GEO. S. SAUNDERS.

M. Henry de Vilmorin.—Owing to delay consequent on the Christmas holidays, we regret we are unable to publish the portrait of M. Henry de Vilmorin, to whom this volume is dedicated.



